A COMPENDIUM

MODERN GEOGRAPHY,

POLITICAL, PHYSICAL, AND MATHEMATICAL;

WITH A CHAPTER ON THE ANCIENT GEOGRAPHY OF PALESTINE,
DESCRIPTIVE AND PRONOUNCING TABLES,
OUTLINES OF ASTRONOMY AND OF GEOLOGY,
QUESTIONS FOR EXAMINATION,
A GLOSSARY OF GEOGRAPHICAL NAMES, ETC.

WITH ELEVEN COLOURED MAPS.

By the REV. ALEXANDER STEWART, LL.D.

Thirty-third Edition, Revised and Enlarged.

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PREFACE TO ENLARGED EDITION.

THE distinctive features of STEWART'S MODERN GEOGRAPHY remain untouched in the present enlarged edition.

Each country is introduced with lists of natural features and political divisions, serving as a guide to the study of the map: the "Remarks" present a miniature view of each country, such as may interest the student at the time, and afterwards serve to interpret the geographical references of a general kind that occur in the conversation of intelligent people: the "Exercises" enable the student to test his familiarity with the preceding matter in prospect of an examination, or with a view to accurate knowledge for its own sake: and the "Descriptive Tables" form a repertory of details, topographical, statistical, and to a considerable extent historical also, too multitudinous indeed for memory, but valuable for reference.

The original plan has been filled in anew, because, though accuracy might have been maintained, as in previous editions, by mere revision, yet well-proportioned treatment according to the progress of exploration and science, and the actual facts of industry, commerce, and society, could no longer be otherwise secured.

For the sake of obtaining a still more life-like picture of each country, the "Remarks" and the corresponding "Exercises" have been entirely re-written. The "Descriptive Tables," which have been greatly enlarged, embrace the results of recent census-taking in various parts of the world. The scientific chapters at the end of the book have received competent revision, and will be found abreast of present information.

The Publishers have every confidence that this improved and enlarged edition will maintain and increase the popularity of the work.

EDINBURGH, *August* 1884.

LIST OF MAPS.

NOTE.

The accented letters in the Descriptive Tables indicate the proper pronunciation of the names in which they occur.

ā sounds like *a* in f*a*te.
ă „ „ *a* in p*a*n.
ä „ „ *a* in f*a*r.
ē „ „ *e* in h*e*re.
ĕ „ „ *e* in p*e*n.
ī „ „ *i* in p*i*ne.
ĭ „ „ *i* in p*i*n.

ū sounds like *u* in *u*se.
ŭ „ „ *u* in f*u*n.

u in Roman type in conjunction with italic, has the sound of *u* in the Scotch word *schule*, for school.



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INTRODUCTION.

THE term **Geography** is derived from two Greek words, and means a description of the earth. It comprehends **Natural** or **Physical Geography**, a description of the earth's surface and its natural productions; **Political Geography**, a description of the earth as divided among tribes and nations of men, and utilized by them; and **Mathematical Geography**, a description of the earth as a member of the solar system.

The earth is not, as was long believed, a plain. It is a ball, orange-shaped by being a little flattened at two opposite points, and is fairly represented by a globe. Its globular form is proved by the following facts:—

1. When a ship sails away, the hull disappears first and the topmasts disappear last from the spectator's view. On the other hand, when a ship approaches, the topmasts come first and the hull comes last into view. These facts prove that the ocean is convex,—that is, bulges up between the spectator and a distant ship. Now this happens everywhere; and, since the elevation of the land above the ocean is inconsiderable, compared with the earth's bulk, it follows that the surface of the whole earth is convex—in other words, that the earth is a ball.

2. The earth is being sailed round every day, a feat which was first performed by Magellan's ship in the years 1519–22.

3. The sun does not give light to the whole surface of the earth at once, but always to one half at a time; and, to places in the east, his time of rising is earlier than to places in the west. All this is just what would happen were the earth a ball rotating eastward: none of it could happen if the earth were a plain.

4. The pole-star appears higher and higher in the heavens to the traveller going north; and sinks in the same proportion

to the traveller going south. This, again, which could not happen if the earth were a plain, is just what would happen if the earth were a ball.

5. In eclipses of the moon, the earth's shadow is circular; and it is only a round body which can in every position throw a circular shadow.

General Preliminary Definitions.

A **sphere** is a round *body*, every point on the surface of which is at the same distance from a point within, called **the centre.** The earth, being orange-shaped, is not a sphere, but a **spheroid,** or sphere-like body.

A **circle** is a space inclosed by one round or curved *line*, every point in which is at the same distance from a point within, called **the centre.** The term **circle** is sometimes applied to the round or curved line, which, however, is more properly called **the circumference.**

A **diameter** of a sphere, or of a circle, is a straight line from any point on the surface of the sphere, or in the circumference of the circle, passing through the centre to the opposite side.

The **radius** of a circle, or of a sphere, is a straight line drawn from the centre to the surface of the sphere, or to the circumference of the circle. All radii of the same circle, or same sphere, are equal to each other, and each is half of the diameter.

A diameter divides its circle into two equal parts, called **semicircles.**

An **arc** is any portion of the circumference.

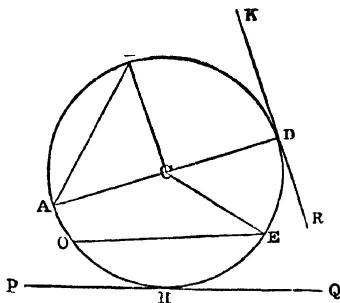
A **plane** is a flat surface, such as that of a table or mirror.

An **angle** is the opening between two straight lines which meet, but are not in the same straight line.

When one straight line stands upon another, so as to make the angles on each side equal to each other—that is, neither leaning to one side nor to the other—it is called a **perpendicular**; and each of the angles is a **right angle.**

When two planes are everywhere at the same distance from each other, or when two lines are everywhere at the same distance from each other, they are said to be **parallel.**

In the accompanying diagram, the curved line A O H E D B is a circle, or more properly the circumference of a circle, of which C is the centre, equidistant from every point of the circumference. C A, C B, C D, C E, are radii. A D is a diameter, dividing the circle into two equal spaces, and the circumference of the circle into two equal curves. The line K D R, on which the diameter stands at right angles, touches, but does not cut the circumference, and is therefore called a **tangent** to the circle. The line P H Q is also a **tangent.** The opening between A B and A C is an angle, called the angle B A C, the angular point A, *i.e.*, the point where the lines meet, being placed in the middle in naming the angle. C E O, A C E, A B C, A C B, are angles. B C D and B C A are right angles; and so also are C D K and C D R. B C is perpendicular to A D; C D is perpendicular to K R. B C and K R are parallel.



For the purpose of measuring distances on circles, the circumference is divided into 360 equal parts. These parts are called **degrees,** and are marked thus (°), so that 70° means 70 degrees. To express still smaller parts, each degree is divided into 60 equal parts, called **minutes,** and marked (′); then each minute is subdivided into 60 equal parts, called **seconds,** and marked (″), so that 35° 46′ 57″ means *thirty-five degrees, forty-six minutes, fifty-seven seconds.*

The whole circumference being divided into 360°, there are in a semicircle 180°, and in half a semicircle, called a quadrant, 90°.

A degree has no constant length. Being always the 360th part of the circumference of some circle, it varies in length with the size of the circle. But if a degree be marked off on the circumference of any circle, *i.e.*, if the 360th part of the circumference be marked off, and lines be drawn from the extremities of the part marked off to the centre of the circle, the

angle so formed at the centre will be the same, whatever the size of the circle. This fact can be easily verified by means of concentric circles. The arc, or part of the circumference, on which the angle at the centre stands, thus becomes a measure of that angle. In diagram 1, the angles A C E and D C E are measured by the number of degrees, minutes, and seconds in the arcs A H E and D E, on which they respectively stand; the angle A C E by the arc A H E; the angle D C E by the arc D E. The angle B C D, whose arc B D is a quadrant, or fourth part of the circumference, is an angle of 90°: the angle D C E must be considerably less, say 60°: the angle A C E, again, is greater, say 120°.

An angle of 90° is a right angle.

The **plane of a circle** is the imaginary flat surface which, touching every point in the circle, may be thought of as continued ever so far beyond the circle.

A **great circle** of a **sphere** is a circle the circumference of which is drawn upon the sphere, so that the plane of the circle passes through the centre of the sphere.

A great circle of a sphere divides the sphere into two equal parts, called **hemispheres.** All great circles of a sphere are equal to each other; cross each other twice; and divide each other into two equal semicircles.

A **small circle** of a **sphere** is a circle the circumference of which is drawn upon the sphere, so that the plane of the circle does not pass through the centre of the sphere. A small circle divides the sphere into two unequal parts.

Rotation is the motion of a body turning on itself. The body is said to rotate or revolve.

When a body rotates and has no other motion, as when a top sleeps in spinning, there is a line in it which keeps the same place, while every other part describes a circle round that line. That line is called the **axis of rotation,** or, shortly, the **axis.**

A body may have a motion of **translation,** that is, be continually changing its place, at the same time that it has one of rotation; as the wheel of a carriage in motion. Other motions than these may also be combined in a body at the same time.

EXERCISES.

What is the meaning of the term Geography? What observations on land and sea show that the earth is a ball? Mention celestial proofs of the same fact. What is a sphere, what a spheroid, and which of them best represents the earth? Draw a circle; within it draw a diameter, and two radii forming an angle; also draw a tangent to it. Define circle, and the plane of a circle. How many radii are equal to one diameter? Into how many parts is a circle divided, and what are they called? How is it that an arc of a circle, varying in actual length, as it does, with the size of the circle to which it belongs, nevertheless measures always the same angle at the centre? What is the difference between a great and a small circle of a sphere? What is meant by rotation? What two motions are performed at once by the wheel of a carriage that is being driven along a road?

GEOGRAPHICAL DEFINITIONS.

I. *Definitions in Mathematical Geography.*

THE earth has a continual motion of rotation, which is performed once in every twenty-four hours, and is called its **diurnal motion.** Its shortest diameter is its axis; and the extremities of the axis, that is, the two points where the axis reaches the surface, are called the **poles** of the earth, distinguished as **north pole,** and **south pole.**

The great circle round the globe, equidistant from both poles, is called the **equator,** because it divides the globe into two equal hemispheres, distinguished as **northern hemisphere,** and **southern hemisphere.** The people who live at the equator have equal day and night during the whole year.

A **meridian circle** is a great circle round the globe passing through both poles, and the half, measured from pole to pole, of such a circle, is called a **meridian.** The name is derived from the Latin *meridies* (midday); for it is midday at any place when the sun, being above the horizon, is in the plane of the meridian which passes through that place. The sun is then said to be *on the meridian* of the place.

Parallels of latitude, shortly called **parallels,** are small circles round the earth, parallel to the equator.

Every meridian crosses the equator and every parallel at right angles.

Though the earth is most correctly represented by a globe,

it is also desirable to have the surface both of the whole earth, and of particular countries, represented on maps which are flat. As the earth is round, there must be many inaccuracies in such a representation of it, and these inaccuracies will be greater the larger the portion of the earth's surface we attempt to exhibit on a plane. A small portion of the earth's surface, as a county, or even one considerable country, is very nearly a plane, and we may make a tolerably correct picture of it on a flat sheet. But we cannot do so with a picture of the whole earth.

In maps, the whole globe is usually represented by two circular surfaces, joined to each other at one point only, as in the frontispiece to this book. Each circular surface exhibits one hemisphere, that is, as much as a person can see of a globe when it is set before him. In the map of the world, in the frontispiece, and in each of the four figures at the corners, as well as in diagram 2, the circular flat surface is intended to represent the whole of the round or convex surface of a hemisphere.

Diag. 2.

The upper part of a map is called the *North;* the lower the *South;* the right side the *East;* the left side the *West.* A

place is said to be *north* of one *below* it; *south* of one *above* it; *east* of a place to the *left* of it; *west* of a place to its *right*. In this description, we are looking towards the north.

In diagram 2, if N represents the north pole of the earth, and S its south pole, then the line E Q, equidistant from N and S, will represent the **equator**—or rather one half of the equator, the other half being on the other side of the earth. The half of the equator that is seen appears to be a straight line; whereas it is a semicircle, and appears so when represented on a globe.

All the lines from N to S are **meridians**, and represent semicircles; whereas the middle one appears as a straight line, and of the others, only two are true semicircles, namely, the two parts of the outer circle, N E S and N Q S. Meridians are also shown in the figure at the right hand, in the lower corner of the frontispiece: they run due north and south.

The lines extending, in diagram 2, between the same numbers on each side, and also the dotted lines Z *h*, *k* *o*, *a* *b*, *m* *n*, are **parallels**, more correctly halves of parallels. Each represents a semicircle. Parallels are also shown in the figure at the left hand lower corner in the frontispiece: they run due east and west.

North, South, East, and West are easily found out on the earth by means of the sun, the pole-star, or the mariner's compass. As the meridians run due north and south, and the British Isles lie north of the sun's path, if an inhabitant of this country looks at the sun when he is on the meridian, that is, at noon, he looks due south; north is behind him; east is at his left hand, and west at his right. On the other hand, the inhabitants of New Zealand, which lies south of the sun's path, see the sun in the north at their midday. The method of finding north, etc., by the pole-star is described in the section on Astronomy. In the mariner's compass, the needle points to the magnetic pole of the earth; and the true north is obtained by allowing for what is called the *variation* of the needle.

Latitude is the distance of a place north or south from the equator: it is measured in degrees, minutes, and seconds along the meridian of the place.

All points in a parallel being at the same distance from the equator, all places on the same parallel have the same latitude. The latitude of each parallel drawn on a map is marked in degrees on the sides of the map. Thus, if we wish to find the latitude of the point *c* in diagram 2, we look along the parallel passing through it, and find it marked 30. This means that *c* is in north latitude 30°, or, shortly, 30° N. L. In like manner, *e* is in south latitude 30°, or 30° S. L.

The length of a degree of latitude is about 69 miles 70 yards. In consequence of the earth being a spheroid, and not a true sphere, the measure of a degree of latitude is slightly different at different places, increasing in length a little from the equator towards the poles.

Longitude is the distance of a place east or west from some meridian agreed upon, called the *first meridian*. The British measure longitude from the meridian of Greenwich, because the Royal Observatory is there; the French from the meridian of Paris.

Longitude is measured in degrees, minutes, and seconds, along the parallel of the place. As each meridian is, everywhere, the same number of degrees, etc., distant from the first meridian, that distance, in other words, the longitude of each meridian, is marked, as in the frontispiece, so on the artificial globe, only on the equator; but in maps of only portions of the earth's surface, longitude is marked at top and bottom. In diagram 2, if the straight line N S represent the meridian of Greenwich, *r* is in 45° E. L. (east longitude), as may be found by tracing its meridian to the equator, *under* which, in the diagram, longitude is marked. In the same way it will be found that *e* is in 60° W. L. (west longitude). No place can have a greater longitude than 180 E. or W.

In consequence of the parallels decreasing from the equator towards the poles, degrees of longitude diminish as the latitude increases. At the equator, a degree of longitude is about 69 miles 280 yards long; at the Tropic of Cancer, about 64 miles; at London, about 43 miles; at the polar circles, about 28 miles.*

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* See the Table following the Problems on the Celestial Globe, towards the end of the volume.

When the world is shown in two hemispheres, as in the frontispiece, it is usual to make the meridian circle 20 W. and 160 E. the circle of separation between the two hemispheres. By this means the **Old World** is included in one hemisphere, at the right, called the **eastern hemisphere**; and the **New World**, discovered by **Columbus**, is included in the other, at the left, called the **western hemisphere.**

The **horizon,** or **sensible horizon,** of a place, is that circle all round where earth and sky appear to meet. It bounds or limits our view; and takes its name from a Greek participle which means *bounding* or *limiting.*

Planes parallel to the plane of the horizon are called **horizontal,** and lines drawn upon such planes are **horizontal** lines.

Any straight line or plane that is perpendicular to the plane of the horizon is said to be **vertical**; as a cord with a weight at its lower end freely suspended, the walls of houses, etc. When the sun is right overhead at any place, his rays fall on it so as to be at right angles to the plane of the horizon of that place, that is, fall *vertically.* The sun is then said to be *vertical* at that place.

The part of the sky right above the head of the observer is called the **zenith.** There is no difference between saying that the sun is in the zenith of a place and saying that the sun is vertical at a place.

The sun's rays extend 90° all round from the place at which he is vertical. Within that limit there is light; beyond it, darkness. The circle separating light and darkness is a great circle, and is called the **terminator.**

The sun is never vertical at any place north of the parallel of latitude 23° 28′ N. He is vertical there about the 21st of June; and that parallel is called the **Tropic of Cancer.** It is shown by the dotted line *k o* in diagram 2; and may be seen also in the frontispiece.

The sun is never vertical at any place south of the parallel of latitude 23° 28′ S. He is vertical there about the 21st of December; and that parallel is called the **Tropic of Capricorn.** It is shown by the dotted line *a b* in diagram 2; and may be seen also in the frontispiece.

The part of the earth's surface which lies between the tropics is called the **torrid zone.** It is about 47° in breadth, and is the only part of the earth's surface where the sun is ever vertical. It is distinguished by excessive heat, from which it takes its name of *torrid.* Within it, the days and nights are nearly equal.

As the terminator lies 90° all round from where the sun is vertical, when he is vertical at the Tropic of Cancer, which is 23° 28′ N. of the equator, the terminator will extend 23° 28′ beyond the north pole, and will fall 23° 28′ short of the south pole. These are the greatest distances at which the terminator ever is from the poles, and the parallels at these distances from the poles are called the **polar circles**; that which is 23° 28′ from the north pole being called the **arctic circle,** that which is 23° 28′ from the south pole being called the **antarctic circle.** Z *h* in diagram 2 is the arctic circle; *m n* the antarctic circle; they are also shown in the frontispiece.

The parts of the earth's surface which lie between the tropics and polar circles are called **temperate zones,** north and south. The parts within the polar circles, north of the arctic and south of the antarctic circles respectively, are called **frigid zones,** north and south. In the frigid and temperate zones, the sun is never vertical.

In the frigid zones, the cold is extreme; and at midsummer the sun is for several days together above the horizon, as at midwinter he is for several days below the horizon.

In the torrid and temperate zones, the sun is never a whole day of 24 hours above or below the horizon.

In the temperate zones, the prevailing temperature is neither very cold nor very warm; hence the name. Each temperate zone is about 43° in breadth.

The earth being a little flattened at the poles, and bulged out a little along the equator, the polar diameter is the shortest and the equatorial diameter the longest. The polar diameter, which is also the axis of rotation, is about 7899 miles in length; the equatorial diameter about 26 miles more, or 7925 miles. The **mean diameter of the earth is about 7912 miles**; and its mean circumference, that is, the length of a meridian circle, is 24,856 miles. The equator is a little longer, 24,896 miles.

The surface of the earth contains about 197,000,000 square miles, of which about one-fourth is land.

On the artificial globe, a great circle, called **the ecliptic,** may be seen extending obliquely between the tropics. The true meaning of the ecliptic is, a great circle *in the heavens*, representing the path which the sun's centre appears to describe in a year. The ecliptic on the artificial globe intersects, and thereby indicates, the successive parallels at which the sun is vertical during the year; in other words, it represents the yearly course of the verticality of the sun. It crosses the equator twice, to represent that, on the 20th March and the 23rd September, the sun is vertical at the equator. At these two dates, there is equal day and night over all the world. The northern limit of the ecliptic is the Tropic of Cancer; its southern limit, the Tropic of Capricorn.*

The earth rotates from west to east, that is, each place in turning moves *from west to east*. It is this rotation which causes the apparent daily motion of the sun, moon, and stars *from east to west*, and which gives rise to the alternation of day and night.

EXERCISES.

Describe the diurnal motion of the earth. What are the poles? Into what equal portions is the globe divided by the equator? What is the difference between a meridian and a meridian circle? Why is a meridian so called? What are parallels of latitude? Can a portion of the earth's surface be correctly represented on a map? How are north, south, east, and west distinguished on a map? In what three ways can they be ascertained on the earth? Describe the method of ascertaining them by means of the sun and a good timepiece? What are the latitude and longitude of a place? What is generally the length of a degree of latitude? Where does a degree of longitude measure more than a degree of latitude? What is meant by the horizon? What is the zenith? Into how many zones is the earth divided? What are the boundaries of the torrid zone? State the polar, equatorial, and mean diameters of the earth. What is its mean circumference? How many square miles are in its surface? What proportion of its surface is land? What is the ecliptic? What are its northern and southern limits? When is the sun said to cross the equator, and what then takes place? What is the cause of the daily apparent motion of the sun, moon, and stars?

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* Further particulars as to why the Tropics are 23° 28′ distant from the equator, and why the Arctic and Antarctic Circles are 23° 28′ distant from their respective poles, are given in the section on Astronomy; and as to climate, in the section on Physical Geography.

II. *Definitions in Natural and Political Geography.*

The surface of the earth presents two grand divisions of Land and Water—the former occupying about a fourth, the latter about three-fourths of the whole. These divisions, again, are subdivided into parts, named as in the engraving on the following page, which is a map of the chief features of sea and land. The names of these features are defined as under.

A **continent** is a great tract of land comprehending several countries.

A **country** is a smaller portion of land distinguished by a particular name, people, or form of government.

An **island** is a comparatively small tract of land entirely surrounded by water. All land whatsoever is surrounded by water, so that continent and island are not mutually exclusive terms. Australia may be called either the largest island on the globe or the smallest continent.

A **peninsula** is land almost surrounded by water.

A **cape** is a portion of land stretching into the sea. When appearing to terminate in a point, it is often called a **point, head,** or **headland**: when lofty, it is properly called a **promontory.** Local names for cape in Scotland are *mull* and *ness*, the latter being always suffixed.

An **isthmus** is a narrow neck of land joining two continents, or uniting a peninsula and a continent.

A **coast** is that part of the land which borders on the sea: the **shore** is that part of the coast which is next the sea.

A **hill** is a high mass of land; a **mountain,** a still higher mass of land.

A **pass** or **defile** is a narrow opening between two mountains, or between the spurs of a mountain-range and the sea.

A **table-land,** or **plateau,** is a level, or nearly level, tract of land at some height above the sea.

A **plain** is a level, or nearly level, tract of land at no great height above the sea.

A **desert** is a tract of dry and barren land; an **oasis,** a tract of fruitful land in a desert.

A **river** is a stream of fresh water falling into a sea or lake.

ENGRAVING SHOWING THE CHIEF FEATURES OF THE EARTH'S SURFACE AS DISPLAYED ON MAPS.

A **valley** is a hollow in the land, following the course of the river which flows along the bottom of it.

A **delta** is the name given to the space between the forked branches or mouths of a river. The mouth of a river, when it enlarges into an arm of the sea, in which the tide flows and ebbs, is called its **estuary.**

A **basin** is the tract of land drained or watered by a river and its tributaries. A **watershed** is the ridge or height which divides one basin from another.

A **lake** * is a body of water surrounded by land, except at the outlet; lakes without outlet are, of course, wholly surrounded by land.

An **ocean** is a very large portion of salt water.

A **sea** is a smaller portion of salt water. The Caspian Sea, the Dead Sea, and the Sea of Galilee are properly lakes.

An **archipelago** is a sea studded with islands.

A **gulf** is a portion of water occupying a recess in the outline of the land.

A **bay** is a portion of water similarly situated, but with a wider opening than a gulf.

A **creek** is a narrow portion of water running into the land.

A **strait** is a narrow passage of water connecting two seas. **Sound** is a Scandinavian word for strait, which occurs in the geography of Scotland and Denmark.

A **channel** is a passage between two seas, longer and broader than a strait.

Firth, akin to the Norwegian *fiord,* is applied in the geography of Scotland to both a channel and a strait.

Roads is a portion of sea near the land, where ships can ride safely at anchor.

The political divisions of the earth are chiefly empires, kingdoms, and republics.

An **empire,** which usually consists of several countries or states united under one sovereign, has for its head an emperor; and a sovereign so called is expected to lead his armies in person.

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* The term *lake* often appears under the form *loch* in the geography of Scotland, and under the form *lough* in the geography of Ireland; arms of the sea are also called *loch* and *lough* in Scotland and Ireland respectively.

A **kingdom** is a country governed by a king.

A **republic** is a country governed by rulers whom the people choose and change at pleasure.

General Divisions.

The great land divisions of the globe are, the continents of **Europe, Asia, Africa,** and **America,** which make the four quarters of the globe, and **Oceania.**

Europe and Asia form one great mass of land, to which Africa is united by the Isthmus of Suez; these three constitute the *Eastern* or *Old World.* North and South America, united by the Isthmus of Darien, is called the *Western* or *New World.* Oceania occupies portions of both the eastern and western hemispheres.

The great oceans are, the **Atlantic** Ocean, the **Pacific** Ocean, the **Indian** Ocean, the **Arctic** Ocean, and the **Antarctic** Ocean, occupying an area of 147 millions of square miles.

The land on the earth's surface, including lakes and inland seas, contains about 50 millions of square miles,* and the population is in round numbers 1400 millions.

The chief races and religions of mankind are thus distributed:—

Caucasian	400 millions.	Hebrew	8 millions.
Mongolian	570 ,,	Christian	371
Ethiopian	200 ,,	Mohammedan	200
Malay	230 ,,	Brahman	250
		Buddhist	371
		Other Pagans	200
	1400		1400

In respect of complexion, the Caucasian race is white, the Mongolian brown, the Ethiopian black, the Malay tawny. The American Indians, who may number about a million, are copper-coloured. Of the Christians, about 91 millions are of the Greek Church, 175 millions are Roman Catholics, and 105 millions are Protestants.

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* Superficial areas are given in square miles, that is, in square spaces measuring a mile on each side of the square. The areas throughout this work are given in British square miles.

EXERCISES.

What are the two grand divisions of the surface of the earth? What is a continent, a country, an island, a peninsula, an isthmus, a hill, a mountain, a table-land, a plain, a desert, an oasis, a valley, an ocean, a sea, a river, a delta, a firth, a basin, a watershed, a lake, a gulf, a bay, a creek, a strait, a channel? Give six names which stand for *cape*, two of them peculiar to Scotland. Distinguish between *coast* and *shore*. Mention two kinds of *pass*. What is an empire, a kingdom, a republic? Mention the four quarters of the globe. How are these grouped? To which hemisphere does Oceania belong? What are the names of the five great oceans? What is the extent of land and water respectively on the globe? What is the amount of its population? Into what races is the population of the globe divided? What complexions have the four principal races of men respectively? What are the chief religions of the world? What are the three great ecclesiastical divisions among Christians?

EUROPE

Is bounded N. by the Arctic Ocean; W. by the Atlantic Ocean; S. by the Mediterranean, the Archipelago, the Sea of Marmora, the Black Sea, and Caucasus Mountains; E. by the Caspian Sea, the River Ural, and the Ural Mountains.

The superficial area is about 3,800,000 square miles; and the population nearly 334 millions.

Countries.	Capitals.
British Isles	London.
Sweden and Norway	Stockholm.
Denmark	Copenhagen.
Netherlands	Amsterdam.
Belgium	Brussels.
France	Paris.
Spain	Madrid.
Portugal	Lisbon.
Switzerland	Bern.
Italy	Rome.
Turkey	Constantinople.
Roumania	Bucharest.
Bulgaria	Sophia.
Servia	Belgrade.
Montenegro	Cetigne.
Greece	Athens.
Russia	St Petersburg.
German Empire	Berlin.
Austria-Hungary	Vienna.

The principalities of Liechtenstein on the Upper Rhine, and Monaco on the extreme south-eastern coast of France; also the republics of Andorra in the Pyrenees, and San Marino in the Apennines, are nominally independent, but of no political importance.

Islands.—In the Arctic Ocean, Nova Zembla, Franz Joseph Land, Spitzbergen; in the Atlantic Ocean, Iceland, Great Britain, Ireland, the Azores; in the Cattegat, Zealand, Funen;

the south of France; Gulf of Genoa, in the north-west of Italy; Gulf of Taranto, in the south of Italy; Adriatic Sea, between Italy and Dalmatia; Archipelago, between Greece and Turkey in Asia; Sea of Marmora, between Turkey in Europe and Turkey in Asia; Black Sea, between Russia and Turkey in Asia; Sea of Azov, in the south of Russia.

Straits.—The Sound, between Sweden and Zealand; Great Belt, between Zealand and Funen; Little Belt, between Funen and Jutland; Strait of Dover, joining the German Ocean and the English Channel; Strait of Gibraltar, joining the Atlantic and the Mediterranean; Strait of Bonifacio, between Corsica and Sardinia; Strait of Messina, between Italy and Sicily; the Hellespont or Dardanelles, joining the Archipelago and the Sea of Marmora; Strait of Constantinople, joining the Sea of Marmora and the Black Sea; Strait of Yenikale, joining the Black Sea and the Sea of Azov.

Lakes.—Lake Ladoga, and Lake Onega, in Russia; Lake Wener, and Lake Wetter, in Sweden; Lake of Geneva, on the confines of Switzerland and France; Lake of Constance, on the confines of Switzerland, Germany, and Austria.

Rivers.—The Tagus, in Spain and Portugal, falls into the Atlantic Ocean; the Ebro, in the north-east of Spain, falls into the Mediterranean Sea; the Rhône, in Switzerland and France, falls into the Gulf of Lions; the Loire, in the west of France, falls into the Bay of Biscay; the Seine, in the north of France, falls into the English Channel; the Thames, in the south of England, falls into the North Sea; the Rhine, in Switzerland, Germany, and the Netherlands, falls into the North Sea; the Elbe, in Germany, falls into the North Sea; the Oder and the Vistula, in Germany, fall into the Baltic Sea; the Dnieper, in Russia, falls into the Black Sea; the Don, in Russia, falls into the Sea of Azov; the Volga, in Russia, falls into the Caspian Sea; the Danube, in Germany, Austria, and the minor states recently formed out of Turkey, falls into the Black Sea; the Po, in the north of Italy, falls into the Adriatic Sea.

REMARKS.

Europe extends from 36° 0′ to 71° 5′ N. lat.; and from 9° 30′ W. to 68° 0′ E. long. Its coast line measures 17,000 miles. Its greatest length, from the Rock of Lisbon to the E. end of the Caucasus

Mountains on the shores of the Caspian Sea, is 3000 miles; and its greatest breadth, from Cape Tarifa in Spain to the North Cape in Norwegian Lapland, is 2400 miles. The North Cape is on the island of Mageröe; the most northerly cape of the continent is Nordkyn, 4 miles south of North Cape.

Cut off the peninsulas of the European continent, and there remain two compact masses of land, each with mountains and a river-system of its own: one of them, Central Europe, with the lofty Alps as its head of drainage; the other, Russia, with the lowly Valdai Hills as its head of drainage. The mean height of the Alps is about 8000 feet, only a little below the limit of perpetual snow, which is 8700 feet on the north side, and from 8500 feet to 10,100 feet on the south side. The highest summit of the Alps is Mont Blanc, 15,732 feet, on the confines of France and Italy. From them flow the Rhine and Rhône, also tributaries to the Po and Danube. The Valdai Hills, though forming the watershed between the Caspian and Black Seas on the one hand, and the Baltic on the other, are only 1200 feet above the ocean-level, and appear as a mere undulation in the great European plain.

Although the smallest of what used to be called the four quarters of the globe, Europe is the second in population, and by far the most important, from the progress of its inhabitants in learning, science, and arts. The pre-eminence of Europe is most strongly shown by the fact that European races have either colonized or are ruling one-half of Asia, large tracts in Africa, the whole of America, and the greater part of Oceania. Excepting a small portion in the extreme north, Europe lies within the temperate zone; and in consequence of its highly peninsular outline, which allows the sea almost to surround it, and to penetrate far into its interior by deep gulfs, the extremes of heat and cold are more moderate in Europe than in any other continent within the same degrees of latitude. This effect is at a maximum in western Europe, because of the warm currents of water and air which come from the equatorial Atlantic; but the advantages of a mild temperature, which the western parts of Europe have over the eastern, belong to the whole of Europe, as compared with Asia. The peninsular outline, by facilitating intercourse between country and country, has greatly promoted commerce and industry.

The Christian religion prevails in every part of Europe, even in Turkey, where Mohammedanism is the faith of the ruling race. The three principal forms of Christianity are professed respectively by the three principal races into which Europeans are divided: the Greek form is preferred by the Slavonic races, who inhabit Russia, Turkey, and Greece; the Roman Catholic form is preferred by the Latin races, who inhabit Italy, Spain and Portugal, France, Belgium, and southern Germany; and the Protestant form is preferred by the Teutonic races, who inhabit northern Germany, the Netherlands, Denmark, Sweden and Norway, and Great Britain. This distri-

bution of the forms of Christianity according to race is true only roughly speaking; yet it is so far true as to be remarkable.

EXERCISES.

Name the boundaries of Europe. What is its superficial area? What countries does it contain? Name two principalities and two republics so insignificant as to be generally omitted from the list of European countries, and state where they are situated. Name and point out the principal islands of Europe. Name and point out its six largest peninsulas. Name its capes, and point out their situation. Describe the situation of its principal mountains. Name and point out its seas and gulfs. Name and point out its straits. Name and point out its principal lakes. Name its principal rivers and trace them on the map.

Between what degrees of latitude and longitude is Europe situated? What are its length and breadth? Peninsulas apart, what two masses of land remain? Contrast the Alps and the Valdai Hills. What fact shows most strongly the pre-eminence of Europe over the other divisions of the globe? What advantage does Europe derive from its peninsular outline? Why are the extremes of heat and cold less great in the west than in the east of Europe? Name the three principal forms of Christianity and the three principal races in Europe. What form of Christianity is preferred by these races of men respectively?

BRITISH ISLES AND EMPIRE.

The United Kingdom of Great Britain and Ireland is the political designation of the British Isles. The constitution of this kingdom is a limited monarchy, the Sovereign being hereditary, male or female, and of the Protestant religion. The Sovereign is the head of the state and of the Church of England, and the fountain of all honours of nobility; has the prerogative of declaring war and making peace, of levying soldiers and appointing officers of the army and navy, of summoning and dissolving Parliament, of appointing judges and inferior magistrates. Parliament consists of the House of Lords, which is made up of all the peers of England, about 420 in number, of sixteen Scotch peers elected for each parliament by the whole body of Scotch peers, of twenty-eight Irish peers elected for life by the whole body of Irish peers, and of twenty-six prelates of the Church of England. The House of Commons consists of 652 members elected by counties, towns, and universities. All parliamentary measures, before passing into law, must pass both Houses, and receive the royal assent. The executive government is vested in the Crown and Cabinet Council, of which the Prime Minister is head.

The only British island not represented in the British parliament is Man. Like the Channel Islands, a dependency of the British crown off the coast of Normandy, Man has a parliament of its own. The parliament of Man consists of a Council of eight, with the Bishop of Sodor and Man as senior; and of the House of Keys, numbering twenty-four members. The Channel Islands are governed by bodies called "States," some members of which are nominated by the crown, others are elected by the people, and others still act *ex officio.*

The population of the British Isles is a mixture of the Celtic and Teutonic races, the former prevailing wherever Celtic dialects are still spoken, as in Wales, with its Welsh or Cymric dialect; in the Highlands of Scotland, with their Gaelic; in the west of Ireland, with its Erse; and in the Isle of Man, with its Manx. The Celtic districts are comparatively remote and mountainous, and in the main pastoral; and the natives, though speaking a Celtic dialect among themselves, understand, with exceptions which are daily becoming fewer, English also.

The union of the three kingdoms and the principality of Wales under one crown and one parliament has not resulted in complete uniformity. Scotland has preserved its own laws and law-courts, and its Presbyterian church establishment; Ireland, with English law, and law-courts modelled on those of England, has no established church, and the great majority of its inhabitants are Roman Catholics; in England and Wales, Protestant Episcopacy is the established religion, and twenty-six of the prelates sit in the House of Lords. Differences of national character, too, are still recognised: the Englishman is credited with an overbearing manner, but also with straightforwardness and love of fair play; the Scotsman with caution bordering on craft, and dogged perseverance; the Irishman with an easy-going lightheartedness inimical to steady labour and practical aims.

Great Britain, so called because it is the largest of the British Isles, is the largest island in Europe; and the whole group enjoys in the highest degree that mild temperature which characterizes Europe as compared with Asia. So great is the effect of the Gulf Stream, that the lines of equal temperature, which in August, when they are determined by the position

of the sun, lie nearly east and west, run nearly north and south in January, being determined then by the warm currents of water and air from the equatorial Atlantic. The pre-eminent mildness of the British climate is best shown by the narrow limits within which temperature varies throughout the year. This range of temperature is at Edinburgh 25°, at London 26°, at Paris 30°, at St Petersburg 55°. The faults of the British climate are variableness of weather from day to day, frequent rains from the south-west, and biting winds, especially in spring, from the east. Both the moisture and the mildness of the British climate are more marked in Ireland than in Great Britain, and on the western coasts than on the eastern; hence the description of Ireland as the Emerald Isle, a moist climate being favourable to grass; also the fact that the dairy counties of Great Britain are on the western side, as Wiltshire, Gloucestershire, Cheshire, and Ayrshire, whereas the best grain counties are on the eastern, as Essex, Norfolk, and the Lothians.

The food producers of the United Kingdom are quite unable to meet the demand of the immense population engaged in mines and manufactures, in trade and commerce, in mechanical and professional pursuits. So preponderant is the non-agricultural population that the exports are chiefly of manufactured articles, and the imports of raw produce, conspicuous among which are the food-supplies. In 1882 the value of these supplies was estimated as under:—

Live Animals.	Dead Meat.	Grain and Flour.	Total.
£9,214,417.	£35,760,286.	£63,539,315.	£108,514,018.

This gives £3 per head of the population.

The enormous resources of the United Kingdom appear in the amount of its income and expenditure, the particulars of which, for the year ending 31st March 1883, are subjoined:—

Income.		Expenditure.	
Customs and Excise...	£46,587,000	Charge for Debt.........	£29,679,098
Stamps......................	11,841,000	Army........................	20,635,951
Land and House Tax......	2,800,000	Navy........................	10,259,853
Income Tax................	11,900,000	Civil List and Civil Charges...............	18,891,999
P. O. and Telegraphs......	9,010,000	Cost of Collection.........	8,928,226
Miscellaneous...............	6,355,505		
	£88,493,505		£88,395,127

The total debt amounted in the same year to £756,376,519. The annual charges for debt and for the army and navy together are each about £30,000,000; and these two charges make up fully two-thirds of the total expenditure.

A characteristic distinction of the United Kingdom is its supremacy in shipping. Not only is the great bulk of the trade between it and other countries carried on in British ships, but so also is a large portion of the trade between one foreign country and another. To make only one comparison, the aggregate tonnage of British steamers is about ten times that of French steamers.

The industry, trade, and commerce of the United Kingdom are facilitated by roads, railways, and telegraphs, which penetrate to the remotest corners; and by a postal system which has been imitated in all other civilized countries, but nowhere else developed to the same extent. The number of letters delivered by post, per head of the population, is in England about 37, in Scotland about 28, and in Ireland about 14; and these numbers, if some deduction be made from the English quota, because of London being the seat of government for the whole United Kingdom, represent pretty fairly the industrial, trading, and commercial activity of the three kingdoms respectively.

Behind all this prosperity lie crime and pauperism, the deposit of passions unrestrained, or of weakness bodily and mental; of ignorance, improvidence, and intemperance, or of adverse circumstances overpowering individual effort. The paupers and poor-rates in the three kingdoms are in round numbers as follows:—

	Paupers.	Poor-rates.
England and Wales	803,000	£13,302,000
Scotland	95,000	845,000
Ireland	590,000	965,000

It thus appears that one-third of the paupers in the United Kingdom belong to Ireland; which means that, in proportion to population, paupers are about four times more numerous in Ireland than in the United Kingdom as a whole. There must be paupers and paupers, however; for England spends about £16 a head on them, Scotland only ten shillings, and Ireland not quite two shillings. Both crime and pauperism are de-

creasing under the influence of the schoolmaster, whose presence everywhere is secured by recent Acts of Parliament; also of a wide-spread movement in favour of total abstinence from intoxicating drinks, and of a thousand agencies having for their object to protect the weak, to succour the destitute, to reclaim the depraved, to encourage thrift, and to spread the feeling that industry and self-control are the best guarantees of personal independence.

The British Empire comprises places and countries in all parts of the world; and although many of them are not colonies in the proper and usual sense of that word, it is convenient so to designate them all, distinguishing them into three classes according to the degree of control exercised over them by the Crown. When the Crown both frames the laws and directs their administration through officers appointed by itself, the colony is called a Crown colony; when the Crown has merely a veto on the legislation, yet appoints the public officers, the colony is called a colony with representative institutions; when the Crown, with merely a veto on the legislation, appoints only its own representative, the governor, the colony is called a colony with responsible government. This threefold distinction is marked in the following summary of the British Empire.

	Kind of Colony.	Population.
In Europe:—		
Heligoland,	Crown,	2,000
Gibraltar,	Crown,	18,000
Malta and Dependencies,	Crown,	150,000
In Asia:—		
Perim,	Crown,	200
Aden,	Crown,	35,165
India,	Crown,	190,841,000
Ceylon,	Representative,	2,959,000
Straits Settlements,	Crown,	422,500
Labuan,	Crown,	6,000
Hong-Kong,	Crown,	160,500
In Africa:—		
W. Africa Settlements,	Crown,	75,000
Gold Coast and Lagos,	Crown,	475,000
Ascension Island,	Crown,	27
St Helena,	Crown,	5,000
Cape Colony and Dependencies,	Responsible,	1,250,000
Natal,	Representative,	413,000
Mauritius and Dependencies,	Crown,	377,000

	Kind of Colony.	Population.
In America:—		
Dominion of Canada,	Responsible,	4,365,000
Newfoundland,	Responsible,	161,000
Bermudas,	Representative,	14,000
Bahamas,	Representative,	43,500
Honduras,	Crown,	27,500
Jamaica and Dependencies,	Crown,	586,000
Leeward Islands,	Representative,	120,500
Windward Islands,	Representative,	284,000
Trinidad,	Crown,	153,000
Guiana,	Crown,	252,000
Falkland Islands,	Crown,	1,550
In Australasia:—		
Fiji and Dependencies,	Crown,	130,000
New Zealand,	Responsible,	534,000
Tasmania,	Responsible,	116,000
Victoria,	Responsible,	860,000
New South Wales,	Responsible,	750,900
Queensland,	Responsible,	214,000
Western Australia,	Representative,	29,000
South Australia,	Responsible,	280,000
The British Isles,	Constitutional Monarchy,	35,250,000

To the above summary might be added the island of Cyprus, which, though nominally Turkish, is administered by the British; the Transvaal, in South Africa, which, though self-governing, acknowledges the suzerainty of the British sovereign; and Zululand, also in South Africa, over which, though nominally independent, the British really exercise a protectorate.

In both area and population, the British Empire far surpasses the renowned empires of antiquity. Of modern empires, the only one that competes with it in area is the Russian; and the only one that competes with it, perhaps even surpasses it, in population, is the Chinese. To make British rule beneficent by a wise combination of force and righteousness is the grand opportunity set in modern times before British citizens.

The British possessions in Europe are noticed here:—Heligoland is an island off the mouth of the Elbe, which was taken from the Danes in 1807, and left in British hands by the Treaty of Vienna in 1814. It is a mass of red sandstone, inhabited by a few fishermen and pilots, with a bank of sand, on which is a bathing establishment well frequented by Germans.—Gib-

raltar is a fortress on Spanish ground, at the entrance of the Mediterranean. It was taken in 1704, during the war of the Spanish succession, and left in British hands by the Peace of Utrecht in 1713. Gibraltar Rock is a limestone promontory, containing a number of stalactitic caverns. Galleries, miles in length, and of sufficient breadth for carriages, have been excavated within the rock, with portholes every twelve yards for defence. A low sandy isthmus connects the Rock with the mainland, and on the west side of the isthmus stands the town, which is a free port.—Malta, an island in the Mediterranean, was taken in 1800, and left in British hands by the Treaty of Paris in 1814. The capital, Valetta, a city of 90,000 inhabitants, with excellent docks, is strongly fortified. The religion of the island is Roman Catholic, and Italian is the language of the educated; the native dialect is more Arabic than Italian.

EXERCISES.

What is the form of the British constitution? What prerogatives belong to the Sovereign? Who are members of the two Houses of Parliament respectively? What difference is there in the tenure by which Scotch and Irish peers respectively hold their seats in the House of Lords? Why have the Isle of Man and the Channel Islands no representation in the British Parliament? What races are mingled in the British population? What three Celtic dialects are still spoken in what three parts of the United Kingdom? How do the three kingdoms differ in respect of religion established by law? What peculiar institutions has Scotland preserved? What qualities are supposed to distinguish the Englishman, the Scotchman, and the Irishman respectively?

Why is Great Britain so called? Account for the mildness of the British climate. Why do the lines of equal temperature in Great Britain change from nearly east and west in August to nearly north and south in January? Compare the range of temperature throughout the year at Edinburgh, London, Paris, and St Petersburg. Name three faults in the British climate. Name the dairy counties and the best grain counties in Great Britain. Why are the latter on the east coast and the former on the west coast?

How much per head of the British population is annually paid to foreigners for food? State in millions sterling the annual revenue of the British government, and the cost of collecting it. State in millions sterling the amount of the national debt, and the annual charge for the same.

Compare British and French steamers in respect of aggregate tonnage. How many letters per head of the population are annually delivered in England, Scotland, and Ireland respectively? How many paupers are there in the United Kingdom? Calculate the number of paupers in every hundred of the population. Show from statistics that the designation *pauper* cannot have the same meaning throughout the United Kingdom. By what means are crime and pauperism being decreased?

Name and define the three kinds of colony in the British empire. What two empires compete with it, the one in area, the other in population? Name the British possessions in Europe, Asia, Africa, America, and Australasia respectively. Which two European islands came finally into British possession in 1814? Describe Heligoland and Gibraltar Rock. How is the town of Gibraltar situated? What about the capital, the language, and the religion of Malta?

ENGLAND AND WALES.

BOUNDED N. by Scotland; W. by the Irish Sea and St George's Channel; S. by the English Channel; E. by the German Ocean or North Sea.

Extent and Population.—The Isle of Man and the Channel Islands included, the area is 58,631 square miles, and the population (1881), 26,354,000.

ENGLAND is divided into forty counties:—

Counties.	Chief Towns.
Northumberland	Newcastle, Alnwick, Berwick, Morpeth, Tynemouth, North Shields.
Cumberland	Carlisle, Maryport, Whitehaven, Penrith, Workington, Keswick.
Durham	Durham, Sunderland, Stockton, South Shields, Gateshead, Darlington, Hartlepool.
Westmorland	Appleby, Kendal, Ambleside.
Lancashire	Lancaster, Liverpool, Manchester and Salford; Preston, Bolton, Blackburn, Wigan, Oldham, Warrington, Rochdale, Ashton-under-Lyne, Bury, Burnley, Accrington, Morecambe, Fleetwood, Barrow-in-Furness.
York	York, Leeds, Sheffield, Hull, Halifax, Scarborough, Bradford, Huddersfield, Wakefield, Dewsbury, Doncaster, Harrogate, Whitby, Middlesbro'.
Lincoln	Lincoln, Great Grimsby, Boston, Stamford, Gainsborough.
Nottingham, or Notts	Nottingham, Newark, Mansfield.
Derby	Derby, Matlock, Buxton, Chesterfield.
Cheshire	Chester, Birkenhead, Northwich, Macclesfield, Stockport, Congleton.
Shropshire, or Salop	Shrewsbury, Bridgnorth, Ludlow, Wellington.
Stafford	Stafford, Burton, Lichfield, Wolverhampton, Newcastle-under-Lyme, Tamworth, Burslem, Stoke-upon-Trent, Hanley, Bilston, Walsall, Wednesbury.
Leicester	Leicester, Loughborough, Bosworth.
Rutland	Oakham, Uppingham.
Northampton	Northampton, Weedon, Naseby, Daventry, Peterborough.

Counties.	Chief Towns.
Bedford	Bedford, Luton, Leighton-Buzzard, Dunstable, Woburn.
Huntingdon	Huntingdon, St Neots, St Ives, Stilton.
Cambridge	Cambridge, Ely, Wisbeach.
Norfolk	Norwich, Yarmouth, Lynn Regis.
Suffolk	Ipswich, Bury St Edmunds, Newmarket, Sudbury, Woodbridge, Lowestoft.
Essex	Chelmsford, Colchester, Harwich.
Hertford, or Herts.	Hertford, St Albans, Ware.
Middlesex	LONDON, Westminster, Chelsea, Brentford, Hampton Court, Uxbridge, Harrow.
Buckingham, or Bucks	Buckingham, Aylesbury, Great Marlow, High Wycombe, Eton, Olney.
Oxford	Oxford, Banbury, Henley, Witney.
Warwick	Warwick, Birmingham, Coventry, Leamington, Stratford-on-Avon, Rugby.
Worcester	Worcester, Kidderminster, Dudley, Stourbridge, Malvern, Droitwich.
Hereford	Hereford, Leominster, Ledbury.
Monmouth	Monmouth, Chepstow, Newport, Pontypool.
Gloucester	Gloucester, Bristol, Cheltenham, Tewkesbury, Stroud, Cirencester.
Wiltshire	Salisbury, Devizes, Trowbridge, Bradford, Chippenham, Marlborough.
Berkshire	Reading, Windsor, Abingdon.
Surrey	Guildford, Croydon, Kingston, Southwark, Lambeth, Farnham, Richmond.
Kent	Maidstone, Canterbury, Rochester, Gravesend, Queenborough, Greenwich, Woolwich, Deptford, Chatham, Margate, Ramsgate, Deal, Dover, Folkestone, Tunbridge.
Sussex	Lewes, Newhaven, Chichester, Brighton, Hastings.
Hampshire, or Hants.	Winchester, Southampton, Portsmouth, Gosport, Lymington, Bournemouth, Newport, Ryde, Cowes, Ventnor.
Dorset	Dorchester, Weymouth, Poole, Lyme Regis.
Somerset	Bath, Wells, Taunton, Bridgwater, Frome.
Devon	Exeter, Plymouth, Devonport, Barnstaple, Tavistock, Tiverton, Dartmouth, Brixham, Torquay.
Cornwall	Bodmin, Truro, Launceston, Falmouth, St Ives, Penzance, Redruth.

WALES is divided into twelve counties:—

Flint	Mold, Flint, Holywell, St Asaph.
Denbigh	Denbigh, Wrexham, Llangollen, Ruthin.
Carnarvon	Carnarvon, Bangor, Conway.
Anglesea	Beaumaris, Holyhead, Amlwch.
Merioneth	Dolgelly, Bala.
Montgomery	Montgomery, Welshpool, Newton, Llanidloes.
Radnor	Presteign, New Radnor, Knighton.

Counties.	Chief Towns.
Brecknock	Brecknock or Brecon, Builth, Hay.
Cardigan	Cardigan, Aberystwyth.
Pembroke	Pembroke, Haverfordwest, Tenby, St Davids.
Carmarthen	Carmarthen, Llanelly, Kidwelly.
Glamorgan	Cardiff, Merthyr Tydvil, Swansea, Llandaff.

Islands.—Man, in which are the towns of Douglas, Ramsey, Peel, and Castletown; Anglesea, a county of Wales; Scilly Isles, the largest of which is St Mary's; the Isle of Wight, in which are Newport, Cowes, and Ryde; the Channel Islands, namely, Jersey, chief town St Helier, Guernsey, chief town St Pierre, Alderney, and Sark; Sheppey and Thanet, in Kent; Coquet and Holy Island, off the Northumberland coast.

Bays and Straits.—Bridlington Bay, Humber Mouth, the Wash, Yarmouth Roads, the Downs, Strait of Dover, Solent, Spithead, Torbay, Mounts Bay, Bristol Channel, Swansea Bay, Carmarthen Bay, Milford Haven, St Bride's Bay, Cardigan Bay, Carnarvon Bay, Menai Strait, Morecambe Bay, Solway Firth.

Sandbanks.—Dogger Bank, in the German Ocean, between the Yorkshire coast and Jutland; Goodwin Sand, east of Kent.

Capes.—Flamborough Head, Spurn Head, North Foreland, South Foreland, Dungeness, Beachy Head, Needles, St Alban's Head, Portland Point, Start Point, Lizard Point, Land's End, Hartland Point, Worms Head, St Goven's Head, St David's Head, Strumble Head, Great Ormes Head, St Bees Head.

Mountains.—Cheviot Hills, Skiddaw, Helvellyn, Scafell, Coniston Old Man, Whernside, Ingleborough, Pennygant, the Peak, the Wrekin, Snowdon, Arran-Fowddy, Cader-Idris, Plinlimmon, Brecknock Beacon.

Lakes.—Derwentwater or Keswick Lake, Ullswater, Windermere, Bala.

Rivers.—Tyne, Wear, Tees, Eden, Yorkshire Ouse, Humber, Mersey, Dee, Wye, Severn, Trent, Witham, Great Ouse, **Thames**, Medway, Itchen, Test, Avon, Exe, Lower Avon.

REMARKS.

England, including Wales, exten[redacted]° 58′ to 55° 46′ N. lat., and from 5° 40′ W. to 1° 45′ E. long. Its length, from Berwick-on-Tweed to the Isle of Wight, is 360 miles, and its breadth, from the North Foreland to Land's End, is 300 miles. The Cheviot Hills form the principal part of its boundary with Scotland.

The general outline of England and Wales is that of a nearly isosceles triangle, Land's End and the S. Foreland marking the extremities of the base, and Berwick-on-Tweed the apex. Along the coast, high grounds generally front the sea, with frequent cliffs, as of chalk at Dover, of sandstone at St Bees: only on the east coast, round the Wash and on both sides of the Thames estuary, and again on the south coast, in Sussex and Hants, does flatness prevail. Except in the north and west, England is for the most part a level country, so cultivated as to be highly productive. Fertile plains occupy the eastern counties, and undulating, well-grassed lands those of the centre and south-east; while all the rest, forming what may be called the north-western moiety, is more or less mountainous. Wales is mountainous throughout.

The Pennine range, starting as an offset from the Cheviots, runs southwards through Westmorland and between Lancashire and Yorkshire, subsiding in the moorland district of Derbyshire and Staffordshire. Except where it rises into the Peak of Derbyshire, the Pennine range is tame. The Cumbrian range, with Scafell and Skiddaw in Cumberland, Helvellyn in Westmorland, and Coniston Old Man in Lancashire, contain the grandest mountain and lake scenery in England proper. Minor ranges are the Malvern Hills between the counties of Hereford and Worcester, the Cotswold Hills in Gloucestershire, and the Mendip Hills in Somersetshire, with continuations to Land's End, which include the desolate Forest of Dartmoor. But all these are surpassed by the Cambrian range, which covers the greater part of Wales, and contains the highest summit in South Britain, Snowdon, 3571 feet, Carnarvonshire, as Scafell, 3229 feet, is the highest summit in England proper.

The principal outlets of drainage are the Humber, the Wash, and the estuaries of the Thames, Severn, and Mersey; on all of which, excepting the Wash, seats of commerce exist. The Wash is too shallow for navigation. Inland from it are the marsh-lands called fens; and on its Lincolnshire coast is a district called Holland, embanked towards the sea and drained by windmill pumps, as is the custom in the Netherlands. The only other extensive marsh-land in England is Romney Marsh, Kent, in which terminates the valley lying between the North and South Downs, known as the Wealds of Surrey, Sussex, and Kent.

The rivers of England and Wales are of little use for navigation above their estuaries, but the principal ones, viz., the Thames, Severn, Mersey, Trent, and Humber, are connected with one another by canals.

The more or less mountainous portion of England and Wales, lying north-west of a straight line drawn from Flamborough Head, Yorkshire, to Portland Point, Dorsetshire, is rich in minerals. Quicksilver is the only one of value not found. In many places, coal and iron occur together, or not far from each other; and it is this happy coincidence that has enabled England to take the lead

of all nations in manufactures and commerce. Every coal-field is a seat of industry. The Newcastle coal-field manufactures iron machinery, glass, and chemicals; the Lancashire and Yorkshire coal-field has Manchester and Leeds for its two poles, the former the centre of the cotton manufacture, the latter of the woollen; the Staffordshire coal-field supports the potteries, and the metallic manufactures of Birmingham, Dudley, and Wolverhampton. The coal-fields of S. Wales and of Cumberland feed the smelting-furnaces of their respective districts. Cornwall is rich in copper and tin; but, not having coal, it exports the ores to the S. Wales coal-field to be smelted. Minor seats of industry exist apart from coal-fields, or not so closely connected with them. The manufacture of salt, both for home consumption and for exportation, is most active in Cheshire, where there is a richly saliferous district 30 miles long by about 12 miles broad. Worsted stuffs are manufactured in Norfolk; woollen hosiery in Leicestershire and Nottinghamshire; blankets and flannels in several Welsh counties; carpets are named after Kidderminster, Wilton, and Axminster; and west of England broadcloth is so called from the small factories in Gloucestershire and Wiltshire. Silk is the only textile fabric in the manufacture of which England does not excel; yet the silk factories of Spitalfields, London, are in some repute.

England is by far the largest, most populous, and wealthiest of the three kingdoms. It is naturally superior to Scotland and Ireland in respect of soil, climate, and mineral wealth; and it has enjoyed for a longer period than either of these countries that perfect security for life and property which enables capital to accumulate and industry to flourish. The connexion between the present and the past has been better preserved in England than in either Scotland or Ireland. The cathedrals of England have been maintained, thanks to unbroken ecclesiastical tradition; and the two archbishops, styled respectively Primate of all England, with Canterbury for his see, and Primate of England, with York for his see, still take rank next to the royal family. The castles of England have expanded into lordly mansions, and the influence of the aristocracy is great. Democracy, nevertheless, is supposed to be advancing. The Established Church contains three schools, or churches, known respectively as Low Church, High Church, Broad Church. English Nonconformity is represented chiefly by Methodists, Congregationalists, Baptists, and Roman Catholics. One great charm belonging to England as an old country with a great past is, that almost every parish contains, if not some well-ascertained historical site, at least the birth-place or the grave of some genius in letters or philosophy, in science or art, in religion or philanthropy.

EXERCISES.

What are the boundaries of England and Wales? What is the superficial area? Name the counties in England. Name the counties in Wales. What are the principal towns of Northumberland? Of Cumber-

land? Of Durham? &c. Where are North Shields, Workington, Yarmouth, Chepstow, Shrewsbury, Brentford, Blackburn, Stockport, Liverpool, Stockton, Brighton, Bridgnorth, Whitehaven, Chichester, Chelmsford, Eton, Bristol, Buxton, Boston, Leeds, Manchester, Harwich, Launceston, Morpeth, Portsmouth, South Shields, Hastings, Chatham, Plymouth, Dover? &c.

What are the principal towns in Flintshire? In Denbighshire? In Carnarvonshire? &c.

Where is Welshpool, Bala, Builth, Holywell, Presteign, Hay, Wrexham, St Davids, Bangor, Kidwelly, St Asaph, Haverfordwest, Llandaff, Aberystwyth, Dolgelly, Swansea? &c.

What are the principal islands? What are the towns of Man? Where is St Pierre? Where is Cowes? Where is St Helier? Where is Newport? Point out the islands on the map. Name the bays, and their situation. Point them out on the map. Name the sandbanks, and their situation. Name the capes. Point them out. What are the principal mountains, and where are they situated? What are the principal lakes? What are the principal rivers? Where is Milford Haven? Where is Flamborough Head? What is the course of the Tyne? Of the Thames? Of the Great Ouse? Of the Medway? Of the Severn? Of the Trent? Where is Plinlimmon, Start Point, Spurn Head, St Goven's Head, Land's End, Whernside, Cader-Idris, Arran-Fowddy, Portland Point? &c.

Between what degrees of latitude and longitude is England situated? What are its length and breadth? What points or places are at the corners of the triangle which represents its general outline? Name the only places where the coast is to a great extent flat. Where are the mountainous districts? Describe the Pennine range. Name four heights in the Cumbrian range, and mention in what counties they respectively are. Where are the Malvern, Cotswold, and Mendip hills respectively? Name the highest mountain in England, and the highest in South Britain?

Name the five principal outlets of drainage. Which one of them has no seat of commerce, and why? In what two districts does marsh-land prevail? What and where are the Wealds? Name five navigable rivers connected by canals.

What is the material basis of England's industrial prosperity? Draw a line north-west of which lie all the mining districts. Name the only valuable mineral not found in England. Name the five principal coal-fields. What towns are the centres of the cotton and woollen manufactures respectively? What industry is characteristic of Staffordshire? Name three seats of metallic manufactures in the Staffordshire coal-field. Why does Cornwall send its copper and tin to South Wales? What are the limits of the saliferous district in Cheshire? What counties are famous for worsted stuffs and woollen hosiery respectively? Name three places famous for carpets. What two counties in the West of England manufacture broadcloth? What textile fabric is manufactured at Spitalfields, London?

In what three respects is England naturally superior to the rest of the United Kingdom? Historically, what advantage has England had? By what styles are the two archbishops in the Church of England distinguished? Name the four principal nonconforming denominations.

DESCRIPTIVE TABLE.

[In this and the following Tables we have endeavoured to give the most approved pronunciation of the names of places, etc., by marking the accented syllable, and, in words where the pronunciation differs materially from the orthography, by adapting the spelling, in *italics*, as nearly as possible to the sound. In many cases the signification of the names is given within parentheses.]

Abera′von (mouth of the Avon), a town of Glamorganshire, on the Avon or Afon, near its mouth in Swansea Bay. Pop. (1881) 4859.

Abergavenny, *ab-er-gain′ne*, an ancient town in Monmouthshire, at the junction of the Gavenny with the Usk, hence its name. Pop. 6941.

Aberystwyth, *ab-er-ist′ith*, a seaport in Cardiganshire, at the mouth of the Ystwyth, hence its name. Pop. 7088.

Ab′ingdon, a town in Berkshire, on the Thames. Pop. 5684.

Ac′crington, a town of Lancashire, the centre of the cotton-printing business. Pop. 31,435.

Al′derney, an island in the English Channel, famous for a breed of small cows. Pop. 2048.—49° 41′ N. lat., 2° 15′ W. long.

Al′dershot, a military town and camp in Hampshire. Pop. 20,140 p.*

Alnwick, *an′nik* (the town on the Aln), a town of Northumberland, near which is Alnwick Castle, the magnificent seat of the Duke of Northumberland. Here Malcolm Canmore, King of the Scots, was killed in 1093; and here his great-grandson, William the Lion, King of the Scots, was taken captive in 1174. Pop. 6693.

Am′bleside (the slope of the giant heroes' dwelling), a town of Westmorland, near Lake Windermere. Pop. 1989.

Amesbury, *aims′ber-e*, a town in Wilts, on the Avon, the birthplace of Addison. Pop. 1127 p.

Amlwch, *am′look*, a seaport in Anglesea, with a good harbour, which has been excavated from the slate rock. Pop. 2664.—53, 25 N. 4, 20 W.

An′dover (the ferry of the river Anton), a town in Hampshire, on the Anton. Pop. 5653.

Anglesea, *ang′gl-se* (the island of the Angles or English), an island and county of Wales, joined to the mainland by the Menai Suspension Bridge and the Britannia Tubular Bridge. It possesses rich mines of copper and lead, and is noted as an ancient seat of the Druids. Pop. 51,416.—53, 18 N. 4, 20 W.

Ap′pleby (the town of apple trees), the county town of Westmorland, on the Eden; it is situated in two parishes. Pop. 2899 p.

Ar′ran - Fowddy, *vou′the*, a mountain in Merionethshire, 2955 feet high.

Ar′undel, a town in Sussex, on the Arun. Pop. 2748.

Ash′burton, a town in Devonshire. Pop. 2891 p.

Ash′by-de-la-Zouch, *zoosh*, a town in Leicester, near the confines of Derbyshire. Pop. 7465.

Ash′ton-under-Lyne, a manufacturing town in Lancashire. Pop. 37,040.

Ath′elney, once an island, now a marshy tract in Somersetshire, between the rivers Tone and Parret, famous as the refuge of King Alfred the Great in 878.

A′von (a river), a river which rises on the borders of Gloucestershire, flows through Wiltshire, and, passing Bath and Bristol, falls into the Severn 8 miles below the latter city;—a river which rises in the north-west of Northamptonshire, and, flowing through Warwickshire and Worcestershire, joins the Severn at Tewkesbury;—a river in Hants, which flows into the English Channel;—a river in N. Wales, which falls into Cardigan Bay;—another in S. Wales, which flows into Swansea Bay.

Aylesbury, *ails′ber-e*, the county town of Buckinghamshire, famous for ducks. Pop. 28,907.

Ba′la (the head of a river flowing into a lake), a town in Merionethshire, situated at the extremity of Bala Lake. Pop. 1653.

Ban′bury,† a town in Oxfordshire, on the Cherwell. Pop. 12,072.

Ban′gor (high choir), a city and bishop's see in Carnarvon, near the N. entrance of the Menai Strait. Pop. 9026.

Barns′ley, a manufacturing town in

* The letter p. annexed to the number indicates that the population given is that of the parish in which the town is situated.

† Bury is pronounced as if written *berry*.

the W. R. of Yorkshire, with extensive iron-foundries. Pop. 29,790.

Barn'staple (staple denotes a place where merchants were wont to store their goods), a town in Devonshire, on the Taw. Pop. 12,282.

Bar'row-in-Fur'ness, a seaport and manufacturing town of Lancashire, noted for its rapid growth, and for its iron-works and extensive docks. Pop. 47,100.—54, 6 N. 3, 12 W.

Bath, the *Aquæ Solis* (waters of the sun) of the Romans, a beautiful city, the capital of Somersetshire. Pop. 51,790.

Bat'ley, a town in the W. Riding of Yorkshire, 2 miles N. of Dewsbury. Pop. 27,505.

Beach'y Head, promontory on the coast of Sussex,—the highest land on the S. coast of Britain. Height 575 feet.—50, 44 N. 0, 14 E.

Beaumaris, *bo-ma'ris*, a seaport, the county town of Anglesea, situated on the Menai Strait. Pop. 2239.—53, 17 N. 4, 5 W.

Bed'ford (fortress at the ford), the county town of Bedfordshire, on the Ouse. At Elstow, near this, John Bunyan was born in 1628, and while a prisoner in Bedford jail he composed his famous work "The Pilgrim's Progress." Pop. 19,533.

Bed'ford Level, a flat district on the E. coast, comprising the greater part of the marshy district called the *Fens*, the Isle of Ely in Cambridgeshire, and a portion of the N. of that county; also a part of the counties of Suffolk, Huntingdon, Norfolk, Northampton, and Lincoln. It is 60 miles in length, and 40 in breadth. In the 13th century the land here was inundated by the sea, and became a pestilential swamp. After many unsuccessful attempts to drain it, the matter was taken up by a company of adventurers in 1634, of which the Earl of Bedford was the leader; hence the name which the reclaimed district has obtained.

Bed'fordshire,* an inland county, bordered on the N. by the counties of Northampton and Huntingdon; on the E. by Cambridge and Hertford; on the S. by Hertford; and on the W. by Buckingham. Area 462 sq. m.; pop. 149,473. The face of the country is pleasingly diversified with gentle alternations of hill and dale. In the S. is a ridge of chalk hills, sparsely covered with soil; the N. and N.E. is well cultivated; and rich grazing land extends from the middle to the S.E. corner of the county. The principal rivers are the *Ouse, Ivel*, and *Lea*. Almost the only manufactures carried on are straw-plaiting (for which *Dunstable* and *Luton* are famous), and thread-lace making, in both of which a large proportion of the female population is engaged.

Bel'per, a town in Derbyshire, on the Derwent, noted for its cotton-mills. Pop. 9875.

Berks or **Berk'shire**, a picturesque inland county lying in the valley of the Thames. It is bounded on the N. by the shires of Buckingham and Oxford; on the W. by Wiltshire; on the S. by Hampshire; and on the E. by Surrey. Area 705 sq. m.; pop. 218,363. —The surface is undulating, rising in some places into hills. The S.E. and E. parts are occupied by *Windsor Forest* and *Park*. On the hills to the N. of Lambourn, in the W., is the famous *White Horse Hill*, remarkable for having the figure of a horse, 374 feet in length, cut out in the turf of the chalk downs; and near it is the ancient burgh of *Wantage*, the birthplace of Alfred the Great. Berks is watered by the *Thames, Kennet, Loddon, Ock*, etc.

Berwick, *ber'rik*, a fortified town near the mouth of the Tweed. Though assigned to Northumberland, it enjoys the privileges of a county by itself. In the wars between England and Scotland, its importance, as a key to both kingdoms, rendered this town and its neighbourhood the scene of frequent contest and bloodshed. Pop. 13,908.—55, 46 N. 2, 0 W.

Bev'erley, a handsome town in the E. R. of Yorkshire, near the Hull. Pop. 11,425.

Bewd'ley (fine place), originally *Beaulieu*, a town in Worcestershire, on the Severn. Pop. 3088.

Bil'ston, a town in Staffordshire, in the vicinity of great coal and iron mines. Pop. 22,730.

Bing'ley, a town in the W. R. of Yorkshire, on the Aire. Pop. 9465.

Bir'kenhead (the head of the birch trees), an important seaport of Cheshire, on the Mersey, opposite Liverpool, with which it is to be connected by a railway tunnel under the river. Pop. 84,006.—53, 24 N. 3, 2 W.

Bir'mingham, a flourishing town in Warwickshire, celebrated for its immense hardware manufactures. Pop. 408,004.—52, 28 N. 1, 53 W.*

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* Shire, when joined to the name, is pronounced short, as if written *shir*.

Bishop-Auck'land, a town in the county of Durham. Pop. 10,097.

Black'burn, an important manufacturing town in Lancashire. James Hargreaves, the inventor of the spinning-jenny, was a native of this place. Pop. 104,014.

Black'pool, a town in Lancashire, much resorted to for sea-bathing. Pop. 14,229.

Bod'min, the county town of Cornwall, with a manufacture of serges. Pop. 5061.

Bol'ton (from Anglo-Saxon *bolt*, a dwelling, and *ton*, an enclosure), a large manufacturing town in Lancashire. Pop. 105,413.

Bos'ton, a seaport in Lincolnshire, situated on both sides of the Witham, a place of considerable trade. Pop. 14,941.—52, 59 N. 0, 2 W.

Bos'worth, Market, a town in Leicestershire, near which, in 1485, was fought a memorable battle between Richard III. and the Earl of Richmond, afterwards Henry VII., in which Richard fell, thus ending the wars of the Roses. Pop. 949.

Bourne'mouth (the mouth of the stream), a fashionable watering-place on Poole Bay, Hampshire. Owing to its sheltered position, it is also a healthful retreat for invalids. Pop. 16,859.

Brad'ford (broad ford), a town in the W. R. of Yorkshire, on the Aire, the chief seat of the stuff and woollen-yarn manufactures in England. Pop. 183,032.

Bradford-on-Avon, or Great Bradford, a town in Wiltshire, celebrated for its woollen-cloth manufactures. P. 4922.

Breck'nock Beacon, a mountain in Brecknockshire, 2910 feet high.

Breck'nock or Brec'on, the county town of Brecknockshire, at the confluence of the Usk and Honddu. Pop. 6247.

Breck'nockshire, an inland county, encompassed by Radnor, Hereford, Monmouth, Glamorgan, Carmarthen, and Cardigan. Area 719 sq. m.; pop. 57,746. The surface is mountainous, the highest summits being the *Brecknock Beacon*, 2862 feet, and *Cradle Mountain*, 2660 feet above the sea. The county is watered by the rivers *Wye* and *Usk*, and a number of minor streams, including the *Irvon, Taw,* and *Taff*. *Llynsafeddar* or *Brecknock Mere*, one of the largest lakes in South Wales, is situated near Brecknock. The people are engaged chiefly in agricultural pursuits. The manufactures of the county are unimportant, and almost confined to coarse woollens and woollen hosiery. The minerals found embrace iron, copper, lead, coal, and limestone. There are extensive iron-works in the S. part.

Brent'ford (ford of the river Brent), a town in Middlesex, on the Brent, a tributary of the Thames, divided into Old and New Brentford. Pop. 11,810.

Brent'wood, a market town in Essex, 17 miles E.N.E. of London. P. 4653.

Bridg'north, a town in Shropshire, intersected by the Severn. Pop. 5885.

Bridg'water, a town in Somersetshire, on the Parret. At Sedgemoor, in its neighbourhood, the Duke of Monmouth was defeated by the forces of King James II. in 1685. Pop. 12,007.

Brid'lington, a town in the E. R. of Yorkshire, situated on the bay of the same name, having Flamborough Head to the N.E. Pop. 6642.

Brid'port, a seaport in Dorsetshire, on the English Channel. Pop. 6795.—50, 44 N. 2, 45 W.

Brighton, *bri'ton*, a fashionable watering-place in Sussex. Pop. 107,546.—50, 50 N. 0, 9 W.

Bris'tol, a seaport in Gloucestershire, formerly second only to London, though now surpassed by Liverpool, is situated on the Lower Avon, near the head of the channel which bears its name. Its mineral waters are much esteemed. P. 206,874.—51, 27 N. 2, 36 W.

Bris'tol Channel, an estuary stretching between the coast of Wales and the counties of Somerset and Devon.

Brixham, Lower (bridge town), a seaport town of Devonshire, where William III. landed in 1688. P. 5366.

Bromwich, West, *brom'itch*, a town in Staffordshire, with coal and iron mines in the vicinity. Pop. 56,295.

Buck'ingham (a town among beeches), a town of Bucks, on the Great Ouse. Pop. 3585.

Buck'inghamshire, a midland county bounded on the N. by Northampton; E. by Bedford, Hertford, and Middlesex; S. by Berks and a small part of Surrey; and W. by Oxford. Area 729 sq. m.; pop. 176,323. The S. part of the county is occupied by the *Chiltern Hills*, and the centre by the vale of *Aylesbury*, which is celebrated for its fertility. The sheep bred in this valley are noted for the weight and fineness of their fleeces. The chief rivers are the *Thames, Ouse, Colne,* and *Thame*. Buckinghamshire, being nently an agricultural county, ha

manufactures. There are some large paper-mills and a few silk-mills on the streams, and lace and straw-plaiting afford employment to women and girls in the small towns and villages.

Bun′gay, a town in Suffolk, on the Waveney, with a considerable trade. Pop. 3579.

Burn′ley, a town in Lancashire, with manufactures of woollen and cotton. Pop. 58,751.

Burs′lem, a town in Staffordshire, a principal seat of the potteries. Pop. 26,522.

Bur′ton, an ancient town in Staffordshire, on the Trent, over which is a bridge of 37 arches; it is famous for its ale. Pop. 39,288.

Bury, *ber′e* (the town), a manufacturing town in Lancashire, on the Irwell. Pop. 52,213.

Bury St Edmunds (so called from King Edmund having been buried here in 933), a town in Suffolk, on the Lark. Its abbey was one of the richest in Britain. Pop. 16,111.

But′termere, a small lake in Cumberland.

Bux′ton, a town in Derbyshire, noted for its mineral springs. Pop. 4110.

Cad′er-Id′ris (Arthur's chair or seat), a mountain in Merionethshire, 2959 feet high.

Calne, an ancient town in Wiltshire. Pop. 5244.

Cambridge, *kaim′bridj*, the capital of Cambridgeshire, on the Cam or Granta, the seat of a celebrated university. Pop. 33,966.—52, 13 N. 0, 7 E.

Cambridgeshire, an inland agricultural county lying to the S. of Lincolnshire, which forms its N. boundary. On the W. it is flanked by the counties of Huntingdon and Bedford; on the S. by Hertford and Essex; and on the E. by Suffolk and Norfolk. Area 821 sq. m.; pop. upwards of 185,594. The districts in the S. and S. W. are elevated; but the surface of the county is mostly flat and marshy—the N. part being comprised in what is known as the Bedford Level. The dairy farms of Cambridgeshire are somewhat noted, and their produce is eagerly sought after in the London markets. The chief rivers are the *Ouse*, with its tributary the *Cam* or *Granta*, the *Nen*, and the *Lark*.

Can′terbury, the *Durovernum* of the Romans, a city in Kent, on the Stour, and the metropolitan see of all England. It has a magnificent cathedral, in which Thomas à Becket was murdered before the altar in 1170. His shrine here was for three centuries one of the great pilgrimages of Christendom. Pop. 21,704.—51, 17 N. 1, 4 E.

Car′diff (the fort or encampment on the Taff), the county town of Glamorganshire, on the Taff. In the castle of Cardiff, Robert, duke of Normandy, was imprisoned by his brother, Henry I. Pop. 82,761.—51, 29 N. 3, 11 W.

Car′digan, the county town of Cardiganshire, on a steep bank near the mouth of the Teivy. Pop. 3669.

Car′digan Bay, a large bay on the W. of Cardiganshire.

Car′diganshire (the territory of Caredig), a maritime county of South Wales; it is enclosed landward by the counties of Montgomery, Radnor, Brecknock, Carmarthen, and Pembroke; Cardigan Bay forms its W. boundary. Area, 693 sq. m.; pop. 70,270. Towards the coast the surface is level; inland it is mountainous, but interspersed with plains, mosses, and fertile valleys. The chief rivers are the *Teivy*, *Dovey*, *Ridol*, *Ystwyth*, *Arth*, and *Towy*. The principal branches of industry are rearing live stock, and silver, copper, and lead mining.

Carlisle, *kar′lile* (the entrenched fort), the capital of Cumberland, and a bishop's see, on the Eden, with an ancient castle and cathedral; it is a great railway centre. Pop. 35,884.—54, 53 N. 2, 56 W.

Carmar′then, a flourishing seaport, and the county town of Carmarthenshire, on the Towy. Pop. 10,514.

Carmar′then Bay, in the Bristol Channel, S. of Carmarthenshire.

Carmar′thenshire is the largest of the Welsh counties. It is bordered on the N. by Cardigan; E. by Brecknock; S. by Glamorgan and Carmarthen Bay; and W. by Pembroke. Area 947 sq. m.; pop. 124,864. The surface partakes of the mountainous character which is general in Wales. The principal level tracts are the plain of *Llaugharne*, which was reclaimed from the sea, and the *Vale of Towy*, which is 20 miles in length by 3 in breadth. The most elevated part is in the E., the loftiest point being *Carmarthenshire Van*, 2596 feet high. The *Towy*, *Cothy*, and *Taff* are the principal rivers. Although the mining operations conducted in Carmarthenshire are very extensive, the leading occupations of the people are those connected with agriculture and grazing. In the S.E.

part of the county numerous collieries are worked. Iron-stone is obtained, and there are several large iron-foundries, tin-plate and copper-smelting works, and stone and marble quarries.

Carnar'von (the fort over against Von or Mon, the ancient name of Anglesea), the county town of Carnarvonshire, on the Menai Strait; its splendid castle, now in ruins, was the birthplace of Edward II., the first English prince who was styled Prince of Wales. Pop. 10,258.

Carnar'von Bay, in St George's Channel, washes the coast of Anglesea and Carnarvon.

Carnar'vonshire is the most mountainous county in Wales, and possesses the sublimest scenery. It is bounded on the N. and W. by the Menai Strait and Carnarvon Bay; on the S. by Cardigan Bay and Merioneth; and on the E. by Denbigh. Area 578 sq. m.; pop. 119,340. *Snowdon* (3590 ft. high) is the loftiest of the mountain peaks. The *Conway* is the principal river. Grazing and dairy-farming are the chief features in the rural industry of the county. Lead and copper-mining and slate-quarrying occupy large numbers of the population.

Castletown, a considerable town on the S. coast of the Isle of Man. Pop. 2243.

Chard, a town in Somersetshire. Pop. 2411.

Chatham, *chat'am*, a town in Kent, on the Medway, one of the principal naval stations in the United Kingdom. Pop. 45,792.—51, 23 N. 0, 35 E.

Chelms'ford, the county town of Essex, on the Chelmer. Pop. 9885.

Chel'sea (contraction of *chesel-ea*, the shingle island), a town of Middlesex, on the Thames, now a suburb of London, where is a grand national asylum, called Chelsea Hospital, for decayed and wounded soldiers. Pop. 366,798.

Cheltenham, *chelt'nam*, a handsome town in Gloucestershire, much frequented for its mineral springs and for the picturesque beauty of its scenery. Pop. 44,519.—51, 54 N. 2, 4 W.

Chep'stow (the market-place), a seaport in Monmouthshire, on the Wye, near its junction with the Severn. Pop. 3591.

Chesh'ire, a county bordering on Wales; it is separated on the N. from Lancashire by the river Mersey; the counties of Flint and Denbigh bound it on the W.; Salop and part of Stafford on the S, and part of Stafford and Derby on the E. Area 1104 sq. m.; pop. 644,037. Except in the E. and W. borders, the surface is flat and well-wooded. The *Mersey*, *Dee*, and *Weaver* are the principal rivers. The soil and climate are alike favourable for Cheshire as a grazing county. Dairy farms are numerous, and the cheese produced is famous throughout the United Kingdom. The mineral products are coal, copper, lead, and rock-salt. Cotton-spinning, printing, and dyeing, afford occupation to large numbers of the population; and manufactures of silk, linen, ribbons, leather, etc., are carried on in several places of the county. On the banks of the Mersey are iron ship-building works of great magnitude.

Ches'ter, on the Dee, the *Deva* of the Romans, the capital of Cheshire, a bishop's see, and a city interesting for its antiquities. Pop. 36,794.—53, 12 N. 2, 54 W.

Ches'terfield (the camp in the field), a town in Derbyshire, on the Rother. Pop. 12,221.

Chev'iot, a range of hills between Scotland and Northumberland; the highest is 2676 feet.

Chi'chester, an ancient ecclesiastical city in Sussex. It possesses a fine cathedral. Pop. 8114.—50, 50 N. 0, 46 W.

Chil'tern Hills, a ridge of chalky hills in the counties of Buckingham, Hertford, and Oxford.

Chip'penham (the market town), a town in Wilts, on the Avon. Pop. 1352.

Chor'ley (the field of the Chor), a manufacturing town in Lancashire, on the Chor. Pop. 19,478.

Chorl'ton-upon-Medlock, a township in the parish of Manchester; in 1801 it contained only 675 inhabitants, and in 1881 no fewer than 55,598.

Christ'church, a town in Hants, with a trade in knit silk stockings and watch-springs. Pop. 28,535.

Cirencester, *sis'is-ter* (the camp on the river Churn), a town in Gloucestershire, on the Churn, a great mart for wool. Pop. 8431.

Clif'ton (the town on the cliff), a suburb of Bristol, Gloucestershire, celebrated for its hot springs, the salubrity of its air, and its beautiful scenery. Pop. 28,695.

Cli'theroe (the cliff near the water), a manufacturing town in Lancashire, on the Ribble. Pop. 10,176.

Cock'ermouth, a town in Cumberland, at the confluence of the Cocker and Derwent. Pop. 7188.

Col'chester, a town in Essex, on the Colne, famous for its oyster fisheries. Pop. 28,395.—51, 53 N. 0, 53 E.

Colne (the colony), a manufacturing town in Lancashire, on an affluent of the Calder. Pop. 7735.

Congleton, *kong'gl-ton*, a handsome town in Cheshire, with manufactures of silks and ribbons. Pop. 11,116.

Con'way, a river of Wales, forming the boundary between the counties of Carnarvon and Denbigh, and falling into the Irish Sea at Conway. The vale through which this river flows is celebrated for its beauty and fertility.

Con'way, or **Abercon'way** (mouth of the Conway), a town in Carnarvon, with the ruins of a magnificent castle. Pop. 3254.

Coquet, *kok'et*, an islet off the coast of Northumberland, at the mouth of the river of the same name.

Corn'wall (Cornish Wales), a county occupying the south-western extremity of England; it is surrounded by the sea except on the E. side, where the river Tamar separates it from Devonshire. Area 1365 sq. m.; pop. about 329,484. From N.E. to S.W. the county is traversed by a ridge of rugged and bleak hills, intersected by valleys of great beauty and fertility. The coasts are rocky and much indented by inlets of the sea. The chief rivers are the *Tamar*, *Lynher*, *Towey*, *Fal*, and *Alan* or *Camel*. Cornwall is rich in metals. Tin was worked there by the Phœnicians long before the Christian era. Silver, copper, lead, antimony, zinc, etc., are extensively mined. Porcelain clay is exported in great quantities. On the coasts are valuable fisheries of pilchard and mackerel.

Cov'entry (convent dwelling), an ancient city in Warwick, celebrated for its manufactures of watches and ribbons. Pop. 42,111.

Cowes, East, *kows* (cove), a seaport on the N. coast of the Isle of Wight, beautifully situated on the Medina. Near this is Osborne House, a marine residence of Queen Victoria. Pop. 2512.—On the opposite side of the river is **West Cowes**, a seaport town and watering-place. Pop. 6721.

Crewe (the place of the cross), a town in Cheshire, seat of the railway works of the London and North-

Croy'don (chalk hill), a town in Surrey, much resorted to as a place of residence by London merchants. Pop. 78,953.

Cum'berland, a northern county lying to the W. of Northumberland; it is famous for its lake scenery. The Liddel and Esk divide it on the N. from the Scotch county of Dumfries; the Solway Firth and Irish Sea bound it on the W., and Lancashire and Westmorland on the S. Area 1564 sq. m.; pop. 250,647. Surface mountainous, with fine valleys between the hills; hence the name Cumberland, the "land of the Cumbri," or dwellers in valleys. The chief mountains are *Scafell*, with two peaks, 3092 and 3229 feet high; *Helvellyn*, 3055 feet; and *Skiddaw*, 3022 feet. There are fifteen lakes in the county, the principal being *Ullswater*, *Derwentwater*, *Bassenthwaite*, *Borrowdale*, and *Buttermere*. The *Eden*, *Esk*, and *Derwent* are the chief rivers. A large portion of the county is devoted to grazing purposes, and butter forms a principal export. The minerals embrace copper, iron, lead, plumbago, and coal. The finest plumbago in the world is found at *Borrowdale*. The coal-field lies along the coast, and seams are worked beneath the sea, nearly two miles beyond high-water mark.

Dar'lington, a town in Durham, with considerable trade and manufactures. Pop. 35,104.

Dart'ford, a town in Kent, where the first paper-mill in England was erected by Sir John Spielman, in the reign of Elizabeth. Pop. 10,163.

Dart'mouth, a seaport in Devonshire, near the mouth of the Dart. Pop. 5725.—50, 21 N. 3, 33 W.

Dav'entry, a town in Northamptonshire, near the source of the Avon and Nen. Pop. 4051.

Deal (the valley), a town on the E. coast of Kent; the fine roadstead, called the Downs, extends in front of the town. Pop. 8500.—51, 13 N. 1, 24 E.

Dee, a river which flows through Bala Lake, in Merioneth, and falls into the Irish Sea, 15 miles below Chester.

Denbigh, *den' be* (little fortress), the county town of Denbighshire, finely situated on an eminence over-

Area 603 sq. m.; pop. 111,740. The surface is rugged and mountainous, with many picturesque and fertile valleys here and there. On the E. is a range of hills about thirty miles in length, the loftiest summit of which is *Moel Fammau*, 1845 feet high. Another range encloses the county on the S.W., the loftiest point being *Modwl Eithin*, 1660 feet above sea-level. The chief rivers are the *Clywd*, *Conway*, *Dee*, and *Alwan*. Denbighshire is mainly an agricultural and mining county. About two-thirds of the area are under cultivation. There are a large number of collieries in operation, as well as several extensive iron-works, blast-furnaces, and smelting-works. Stockings, flannels, and coarse cloths are manufactured by the rural population.

Deptford, *det'ford* (deep ford), a town in Kent, on the Thames, with ship-building yards and fine wet docks. Pop. 76,752.—51, 29 N. 0, 3 W.

Der'by, the county town of Derbyshire, on the Derwent. Here the first English silk-mill was erected in 1718. Here, in 1745, Prince Charles Edward stopped in his march upon London, and turned his steps back towards Scotland, where he was soon afterwards defeated at Culloden. Pop. 81,168.—52, 55 N. 1, 28 W.

Der'byshire, a county in the centre of England, is bounded on the N. by Yorkshire; W. by Cheshire and Stafford; S. by Stafford and Leicester; and E. by Nottingham. Area 1029 sq. m.; pop. about 461,914. The N.W. portion of the county is mountainous and highly picturesque, and is called the *High Peak*. It abounds in lead, and in extraordinary caverns. The greatest elevation is more than 1800 feet above the level of the sea. The chief rivers are the *Trent*, *Derwent*, *Dove*, and *Wye*. The coal, iron, and lead mines are of great importance. Silk and cotton manufactures are extensive.

Der'wentwater, or Lake of Kes'wick, a very picturesque lake in Cumberland.

Devi'zes, a town in Wilts, on the Kennet and Avon Canal. Pop. 6645.

Dev'onport, a seaport in Devonshire, adjoining Plymouth, of which it is considered a suburb. Pop. 48,939.—50, 24 N. 4, 12 W.

Dev'onshire, a county in the W. of England, from its fertility and fine climate, is called the garden of England; it has on the E. Somerset and Dorset; S., the English Channel; W., Cornwall; and N., the Bristol Channel. Area 2589 sq. m.; pop. about 603,595. Its physical features are very diverse. Dartmoor and Exmoor are wild sterile tracts; the valleys in the S. are beautiful and fertile. Devon is chiefly an agricultural and mining county. At the various ports, ship-building is carried on to a considerable extent. The county is noted for its cider, and its butter is the best in the world. The rivers *Exe*, *Taw*, *Tamar*, *Dart*, *Axe*, *Torridge*, and *Teign* traverse Devon in various directions, most of them having estuaries which form convenient harbours.

Dews'bury, the capital of the shoddy manufacture in the W. R. of Yorkshire, pleasantly situated on the Calder. Pop. 29,637.

Dolgelly, *dol-geth'le*, the county town of Merionethshire, situated on the Wnion, at the base of Cader-Idris. Pop. 2455.

Don'caster (camp on the river Don), a town in the W. R. of Yorkshire, celebrated for its horse-races. Pop. 21,139.

Dor'chester, the county town of Dorsetshire, pleasantly situated on the Frome. Pop. 7567.

Dor'king, a town in Surrey, famous for its fowls. Pop. 6328.

Dor'set, or Dor'setshire, a maritime county adjoining Hants, which forms its E. boundary. On the S. is the English Channel; on the W. the counties of Devon and Somerset; and on the N. Somerset and Wilts. Area 988 sq. m.; pop. about 191,028. Chalk downs, on which nearly a million of sheep are pastured, run along the coast, and through the centre of the county from E. to W. The *Stour* and the *Frome* are the principal rivers. The manufactures of Dorset are comparatively small. Much attention is given to dairy farming, which forms a most important branch of industry. Between *Lyme Regis* and *Portland Point*, mackerel fishing is carried on from April to June. The chief mineral products of the county are the noted Portland and Purbeck building stones, coarse marble, and potter's clay.

Doug'las, a seaport and watering-place on the S.E. coast of the Isle of Man, with an excellent harbour. Pop. 15,719.—54, 10 N. 4, 27 W.

Do'ver, a seaport in Kent, about 23 miles from Calais in France, between

which steam vessels regularly sail. Pop. 30,270.--51, 7 N. 1, 19 E.

Downs, a famous roadstead between the Goodwin Sands and Deal in Kent, the usual rendezvous for outward-bound fleets.

Droitwich, *droit'itch* (the place where the dues on salt were paid), a town in Worcester, famous for its brine springs, from which is manufactured a fine white salt. Pop. 3761.

Dud'ley, a town in Worcestershire, surrounded by Staffordshire. Its neighbourhood abounds in minerals, and the iron trade is carried on to a considerable extent. Pop. 46,252.—52, 30 N. 2, 5 W.

Duk'infield, a town of Stockport, Cheshire, on the Tame. Pop. 16,942.

Dungeness', a low shingly point on the coast of Kent, in the English Channel.—50, 55 N. 0, 58 E.

Duns'table (formerly *Dunstaple*, the market-place on the hill), a town in Bedfordshire, noted for its manufacture of strawplait. Pop. 4627.

Durham, *dur'am*, a maritime county of England, open to the North Sea on the E.; the Derwent and Tyne separate it on the N. from Northumberland; Cumberland and a small part of Westmorland bound its W. angle, and the Tees divides it on the S. from Yorkshire. Area 937 sq. m.; pop. 867,258. Surface hilly, sloping from the west towards the coast. The principal rivers are the *Wear, Tyne,* and *Tees.* Durham is one of the chief coal and lead mining counties of England. Iron also is largely mined, and other mineral products are obtained on a scale of great importance. Iron ship-building is extensively carried on at *Sunderland, South Shields, Stockton,* and *Hartlepool.* The manufactures are various, but only important in a few branches.

Durham (the dwelling on the water), the capital of the county, a city and bishop's see, with a university and an ancient cathedral, beautifully situated on the Wear. At Neville's Cross, in the neighbourhood, the Scots were defeated, and their king, David II., taken prisoner, in 1346. Pop. 14,932.—54, 46 N. 1, 34 W.

Ed'dystone, a reef of rocks in the English Channel, 14 miles S.W. from Plymouth, on which stands a lighthouse.—50, 11 N. 4, 16 W.

E'den, a river which rises in Westmorland, and, flowing through Cumberland, falls into the Solway Firth below Carlisle.

Edge'hill, a village in Warwick, near which the first battle in the civil wars between Charles I. and the Parliament was fought, in 1642.

E'ly, a city in Cambridgeshire, situated in a marshy district on the Ouse, called the Isle of Ely. Here is a large and beautiful cathedral. Pop. 8171.

Ep'som, a town in Surrey, noted for its mineral springs. Pop. 6916.

Essex (the country of the East Saxons), an agricultural county on the E. coast. It has as its N. boundary the river Stour, which divides it from Suffolk; Hertford and Middlesex are on the W.; the Thames on the S.; and the North Sea on the E. Area 1657 sq. m.; pop. 576,434. Towards the sea and the Thames the surface is low and marshy, and much broken up into islets and small peninsulas; but towards the centre and the N. it is beautifully diversified with richly-wooded hills and fertile dales. Essex is watered by the *Colne*, the *Chelmer*, the *Crouch*, the *Blackwater*, the *Roding*, etc., as well as by its boundary rivers, the *Thames*, the *Stour*, and the *Lea*. Woollens were formerly manufactured on a large scale in several places in the county, but the trade has greatly declined; the manufacture of silks, however, is still carried on. Off the coast are valuable oyster fisheries.

E'ton (dwelling on the water), a town in Bucks, on the Thames, celebrated for its school called Eton College, founded by Henry VI. in 1441. Pop. 3984.

Eve'sham, an ancient town in Worcestershire, situated on the Avon, in a beautiful vale. Here, in 1265, Simon de Montford, Earl of Leicester, was defeated and slain by the forces of Prince Edward, afterwards King Edward I. Pop. 5112.

Exe, a river which rises in Exmoor Forest, Somersetshire, and, flowing through Devonshire, falls into the English Channel at Exmouth.

Ex'eter, the capital of Devonshire, on the Exe, a fine city and a bishop's see. Pop. 37,685.—50, 42 N. 3, 32 W.

Ex'mouth, a town in Devonshire, beautifully situated at the mouth of the Exe, celebrated as a watering-place and for the mildness of its climate. Pop. 6245.

Fal'mouth, a seaport in Cornwall, with a noble harbour. Pop. 5973.

Farnham, *farn'am* (dwelling among ferns), a town in Surrey, on the Wey,

the birthplace of William Cobbett, and noted for its hop plantations. Near it is the celebrated Aldershot camp. Pop. 4488.

Fern and Sta'ples Islands, two dangerous groups of islets off the coast of Northumberland, on which are two lighthouses.—55, 37 N. 1, 37 W.

Fish'guard (the fisher's enclosure or hill), a seaport in Pembrokeshire. Pop. 2009.

Flamborough Head, *flam'bur-o,* in Yorkshire, a bold and lofty cape, nearly 500 feet high, with a lighthouse.—54, 7 N. 0, 4 W.

Fleet'wood, a seaport in Lancashire, at the mouth of the Wyre. Pop. 6733.

Flint, a town of Flintshire, on the estuary of the Dee. Pop. 5096.

Flint'shire (named from the abundance of quartz or flint found here), is the smallest, but by no means the poorest, of the Welsh counties. It is bounded on the N. by the Irish Sea; E. by Cheshire and the estuary of the Dee; S. and W. by Denbigh. Area 288 sq. m.; pop. 80,587. The surface is much diversified by hills and well-watered vales. The land along the coast is fertile and sheltered. A range of hills, rising to an average height of 500 feet, extends throughout the county. Flintshire abounds in small streams. The *Clwyd* is famous in connexion with the beautiful valley through which it flows. The *Dee* is the only navigable river. Mining and manufactures are both important branches of the local industry; but agriculture gives employment to the largest proportion of the population. Lead, copper, and coal are the principal minerals worked.

Flod'den, a village in Northumberland, 5 miles north of Wooler. Here a great battle was fought between the English and Scots in 1513, in which James IV., the king of the Scots, and many of his nobility were slain.

Folkestone, *fok'ston,* a seaport in Kent, the birthplace of Dr Harvey, who discovered the circulation of the blood. Pop. 18,986.—51, 5 N. 1, 10 E.

Foreland, North and South, two promontories on the east coast of Kent.

Foth'eringay, a village in Northamptonshire, in the castle of which Mary Queen of Scots was beheaded in 1587. Pop. 225 p.

Fow'ey, a seaport in Cornwall, with a fine harbour and an extensive trade in the pilchard-fishery. Pop. 1656 p.

Frome (named from the river, which means "fuming or violent"), a town in Somersetshire, on the Frome, noted for its manufacture of woollen cloths. Pop. 9377.—51, 14 N. 2, 20 W.

Gains'borough, a town in Lincolnshire, on the Trent, with a considerable foreign and inland trade. Pop. 10,873.

Gates'head, a town in Durham, forming a suburb to Newcastle. Pop. 65,803.

Glamor'ganshire (the country on the sea-shore), a county occupying the most southern part of Wales. Brecknock bounds it on the N.; Monmouth on the E.; Bristol Channel on the S.; and Carmarthen on the W. Area 855 sq. m.; pop. 511,433. The land in the N. and N.E. is wild and mountainous; but southward it is level and fertile. The *Vale of Glamorgan,* stretching directly from the base of the mountains towards the sea, is a rich and beautiful plain, and has, not undeservedly, been styled the "Garden of Wales." The highest mountain in the county is *Llangeinor,* 1859 feet above the sea. The principal rivers are the *Rumney, Taff, Ely, Tawe, Avon, Neath,* and *Loughor.* Glamorganshire is eminently a mining and manufacturing county. Coal and iron are abundant, and their proximity and accessibility, together with other natural advantages, have led to this shire becoming a great centre of the iron-smelting and manufacturing trades. The principal iron-works are at *Merthyr Tydvil, Aberdare,* and *Dowlais,* and there are large smelting-works in the vales of *Neath* and *Swansea.*

Gloucester, *glos'ter,* an ancient city and a bishop's see, the capital of the county, situated on the Severn. It has a good cathedral, and carries on considerable trade. Pop. 36,521.—51, 52 N. 2, 14 W.

Gloucestershire, a county in the W., surrounded by the counties of Warwick, Worcester, Hereford, Monmouth, Somerset, Wilts, Berks, and Oxford. Area 1257 sq. m.; pop. 572,433. This county has three natural divisions, viz., in the E. the *Cotswold Hills;* in the W. the elevated district known as the *Forest of Dean,* which abounds with coal and iron; and between these the fertile valley of the Severn, once celebrated for its vineyards, and now equally so for its orchards, gardens, corn lands, and rich pastures, and for the cheese called Double Glo'ster. The principal rivers are the *Severn, Wye,*

Isis, Upper and *Lower Avon.* By means of the Severn, the county has communication with the Bristol Channel, and obtains in a great degree the advantages of a maritime situation.

God'alming, a town in Surrey, on the Wey. Pop. 2505.

Good'win Sands, a large and dangerous sandbank off the east coast of Kent.

Goole, a thriving town in the W. R. of Yorkshire, on the Ouse. Pop. 10,418.—53, 40 N. 0, 52 W.

Gos'port (God's haven), a seaport in Hampshire, on the west side of Portsmouth harbour, with an extensive trade. Pop. 20,155 p.

Gov'en's Head, St, a cape on the S. of Pembrokeshire.—51, 36 N. 4, 55 W.

Grantham, *grant'am*, a town in Lincolnshire, on the Witham. Sir Isaac Newton was born at Woolsthorpe, in its neighbourhood, in 1642. Pop. 16,886.

Graves'end, a seaport in Kent, near the mouth of the Thames, 28 miles from London Bridge. Pop. 23,302.—51, 27 N. 0, 22 E.

Greenwich, *green'itch*, a town in Kent, on the Thames, about 5 miles below London, famous for its Royal Observatory and its Royal Naval College. Pop. 207,028.—51, 28 N. lat.

Grims'by, Great, a seaport in Lincolnshire, near the mouth of the Humber, with extensive docks. Pop. 28,503.

Guern'sey, an island in the English Channel, near the coast of France, 9 miles long by 6 broad. The S. and part of the E. coast is a continued cliff, 270 feet high. Pop. 32,607.—49, 26 N. 2, 37 W.

Guildford, *gil'ford*, the county town of Surrey, on the Wey, once a residence of the English kings. Pop. 10,858.

Hal'ifax, a thriving town in the W. R. of Yorkshire, noted for its woollen manufactures. Pop. 73,630.—53, 44 N. 1, 52 W.

Hamp'shire, abbreviated **Hants**, and in Acts of Parliament called **Southamp'tonshire**, is an important county lying S. of Berks, and including within its limits the Isle of Wight. On the W. it is bounded by Wiltshire and Dorsetshire; on the S. by the English Channel; and on the E. by Sussex and Surrey. Area 1672 sq. m.; pop. about 593,470. Hants is distinguished for its agriculture; its sea-coast has also rendered it of considerable importance as a maritime and commercial county. It is traversed by the ranges of the *North* and *South Downs*. The S.W. portion is occupied by the *New Forest*, and is nearly separated from the main portion by the extensive bay called *Southampton Water*. The county is well supplied with canals and rivers, the chief of the latter being the *Itchin, Avon, Anton, Stour*, and *Tees*.

Hamp'stead and **High'gate**, two large and beautiful villages, about 5 miles N. of London, surrounded by numerous country seats.

Hamp'ton, a village in Middlesex, near which is Hampton Court, an interesting royal palace, founded by Cardinal Wolsey.

Han'ley, a town in Staffordshire, in the centre of the district called the Potteries. Pop. 48,361.

Har'lech, a town on the W. coast of Merioneth, once a place of consequence, now only remarkable for its ancient castle.

Har'rogate, a town in the W. R. of Yorkshire, 21 miles W. from York, famous for its mineral waters. Pop. 9482.

Har'row-on-the-Hill, a town in the county of Middlesex, celebrated for its public school, founded in 1571. Pop. 5558.

Hart'land Point, a promontory in Devon, on the British Channel.—51, 1 N. 4, 31 W.

Hart'lepool, a seaport in Durham, on the Tees. Pop. with West Hartlepool, about 2 m. to the W., 46,990.

Harwich, *har'itch* (army town, so called from its having been a Saxon station or military depôt), a seaport and favourite watering-place in Essex. Pop. 6079.

Hast'ings, an ancient town in Sussex, where Harold was defeated by William the Conqueror in 1066. It is now a fashionable watering-place. Pop. 42,258.—50, 51 N. 0, 36 E.

Haverfordwest, *har'ford-west*, a town in Pembroke, on the Western Cleddau (Clethai), near its entrance into Milford Haven. Pop. 6398.

Hay, a town in Brecknockshire, on the Wye. Pop. 1916.

Hel'ston, a town in Cornwall, on the Looe, with a good harbour. Pop. 3432.

Helvel'lyn, a mountain on the borders of Cumberland and Westmorland, 3055 feet high.

Hen'ley, a town in Oxfordshire, on the Thames. Pop. 4604.

Her'eford (ford of the army), the capital of Herefordshire, and a bishop's

see, on the banks of the Wye. Pop. 19,821.—52, 3 N. 2, 42 W.

Her'efordshire, a county in the W. of England; it is bounded N. by Shropshire; W. by Radnor and Brecknock; S. by Monmouth and Gloucester; and E. by Worcester. Area 836 sq. m.; pop. 121,062. The surface is hilly, with valleys here and there opening out into widespread plains. The principal hills are the *Hatterel* range of the *Black Mountains* in the S.W., and the *Malvern Hills* in the E. The *Lugg*, *Wye*, *Arrow*, *Frome*, and *Monnow* are the chief rivers. The soil is extremely fertile. Orchards are numerous, the apple crop yielding 20,000 hogsheads of cider annually. Cattle and sheep are extensively reared, and the breeds are celebrated. Agriculture is the principal occupation of the people.

Hert'ford, the county town of Hertfordshire, on the Lea. Pop. 7747.

Hert'fordshire, or Herts, a county encompassed by the shires of Bedford, Cambridge, Essex, Middlesex, and Buckingham. Area 611 sq. m.; pop. 203,069. The N. part of the county is skirted by a range of chalk downs (a branch of the Chiltern Hills), rising to an elevation of about 900 feet above the level of the sea. Hertford is chiefly an agricultural county, and ranks among the leading wheat-growing districts of England. More than five-sixths of the surface is under cultivation, and nowhere is the science of farming better understood. The principal rivers are the *Lea*, *Colne*, *Verlam*, and *New River*. The staple manufacture of the county is malt, *Ware* being the largest malting town in the kingdom. Strawplait and paper are extensively made in the S. and W. Corn is the principal article of trade.

Hexham, *hex'am*, an ancient town in Northumberland, on the Tyne, where are many Roman and other antiquities. Pop. 5919.

Holt (woody district), a town in Denbighshire, on the Dee. Pop. 1023.

Hol'yhead, a seaport situated in a small island off Anglesea, from which the Irish packets sail. Pop. 8680.—53 19 N. 4, 39 W.

Ho'ly I'sland, or Lindisfarne, on the coast of Northumberland, about 9 miles in circumference, belonging to the county of Durham; it was anciently the seat of a bishopric, which extended over the south-east of Scotland and the north-east of England. Pop. 686.—55, 9 N. 1, 48 W.

Hol'ywell, a town in Flintshire, with considerable manufactures of cotton, copper, and brass. In the neighbourhood is a rich lead-mine. Pop. 3090.

Hon'iton, a town in Devonshire, on the Otter. Pop. 3358.

Horn'castle (the castle on the promontory), a town in Lincolnshire, on the Bain. Pop. 4818.

Horn'sey, a town of Middlesex, forming a suburb of London. Pop. 22,485.

Hor'sham, a town in Sussex, on the Adur. Pop. 7831.

Hud'dersfield, a town in the W. R. of Yorkshire, where the woollen manufacture is extensively carried on. Pop. 81,841.

Hull, or King'ston-upon-Hull, a seaport in the E. R. of Yorkshire, on the Humber, at the mouth of the Hull. It carries on a great trade. Pop. 154,240.—53, 44 N. 0, 20 W.

Hum'ber, a river, or rather estuary, formed by the junction of the Ouse, Aire, and Trent, and separating York from Lincoln.

Hunt'ingdon (hunter's hill), the county town of Huntingdonshire, on the Ouse. Here Oliver Cromwell was born. Pop. 4228.

Hunt'ingdonshire, an inland county enclosed by the counties of Northampton, Bedford, and Cambridge. Area 359 sq. m.; pop. about 59,491. Almost the whole area of this small county is in arable or pasture lands. The N. portion is fenny, and is included in the midland division of that extensive tract known as the Bedford Level. The *Ouse* traverses the S. angle of the county in a N.E. direction, and the *Nen* skirts its N. boundary. Agriculture occupies the chief attention of the inhabitants. Scarcely any manufactures are carried on except wool-stapling and spinning yarn.

Hythe (a haven), a seaport in Kent on the English Channel. Pop. 4173.

Il'chester, a town in Somersetshire, the birthplace of Roger Bacon. Pop. 683 p.

Ilfracombe, *il'fra-koom* (Elfric's dingle or hollow between the hills), a town of Devonshire, at the mouth of the Bristol Channel. Pop. 6255.

Ingleborough, *ing'gl-bur-o*, a mountain in Yorkshire, 2368 feet high.

Ips'wich, the county town of Suffolk, on the Orwell, the birthplace of Cardinal Wolsey. Pop. 50,546.—52, 3 N. 1, 9 E.

Is'lington, in Middlesex, formerly a pleasant country town, now united to London. Pop. 282,865 p.

It'chen, a river in Hants, which runs into Southampton Water.

Jer'sey (Cæsar's isle), a fertile island in the English Channel, near the coast of France. It is 12 miles long by 7 in breadth, and possesses all the advantages of a delightful climate, a rich soil, and a considerable commerce. Pop. 52,445.—49, 14 N. 2, 10 W.

Keighley, *keeth'le*, a manufacturing town in the W. R. of Yorkshire, on the Aire. Pop. 25,247.

Ken'dal (town in the dale of the Ken), a flourishing town in Westmorland, on the Ken, long celebrated for its woollen manufactures. Pop. 13,696. —54, 20 N. 2, 45 W.

Ken'ilworth, a town in Warwickshire, celebrated for its magnificent castle, now in ruins, where Dudley, Earl of Leicester, entertained Queen Elizabeth for 17 days. Pop. 4150.

Kent (from the Celtic *ceann*, a promontory), an important maritime county occupying a portion of the south-east angle of England. Its N. boundary is formed by the Thames and its estuary; Surrey and Sussex flank it on the W. and S. respectively; and the Strait of Dover on the E. Area 1624 sq. m.; pop. about 977,706. Kent is noted for its uncommonly beautiful scenery. Two principal ridges of hills, continuous with the North Downs of Surrey and Hampshire, traverse the county from W. to E., and terminate in the white cliffs of Dover. These ridges are termed the Upper and Lower Hills; the former, however, is popularly known as the *Hog's Back.* In the S. are the tracts called the *Weald* and *Romney Marsh,* the latter of which comprises 44,000 acres, and affords excellent pasturage for sheep. The soil throughout the county, but especially in the *Isle of Thanet,* is exceedingly fertile. The hop-gardens are the largest in England. Off the coast are several valuable oyster fisheries. Paper-making and ship-building give employment to a large number of the inhabitants. Kent is watered by the *Thames, Medway, Stour, Darent,* and *Rother.*

Keswick, *kes'ik*, a town in Cumberland, beautifully situated on Derwentwater. Pop. 3220.

Ket'tering, a town in Northampton, with a large trade. Pop. 11,095.

Kew, a pretty village on the Thames, with a royal palace and extensive gardens. Pop. 1670 p.

Kid'derminster, a town in Worcester, on the Stour, noted for its manufacture of carpets. Pop. 24,270.

Kidwel'ly, a town in Carmarthenshire, on Carmarthen Bay. Pop. 2510 p.

King'ston - upon - Thames, an ancient town in Surrey, on the Thames. Pop. 20,648.

Kirk'by-Lons'dale, a neat town in Westmorland. Pop. 1733.

Knares'borough, a town in the W. R. of Yorkshire, on the Nidd. Pop. 5000.

Knighton, *ni'ton*, a town in Radnorshire, on the Teme, which separates Wales from Shropshire. Pop. 1720.

Lam'beth, a large town in Surrey, forming the western extremity of that part of the metropolis which lies on the S. bank of the Thames. Pop. 499,255.

Lam'peter, a town in Cardiganshire, near valuable lead-mines. Here is St David's College, founded in 1822 for the education of the Welsh clergy. Pop. 1443.

Lan'cashire, one of the most populous and important of English counties, is bordered on the N. by Cumberland and Westmorland; W. by the Irish Sea; S. by Cheshire; and E. by Yorkshire, from which it is separated by the long ridge familiarly known as the "Backbone of England." Area 1905 sq. m.; pop. 3,454,441. The county is very irregular in form, the district of Furness, on the north-western side, being entirely divided from the rest of the county by Morecambe Bay. Surface rugged and mountainous in the N. and E., but level towards the coast. The highest summit in the north is the *Old Man* in *Coniston Fells,* 2577 feet above sea-level. The chief rivers are the *Mersey, Ribble, Wyre, Lune, Leven,* and *Duddon,* all of which fall into the Irish Sea by large estuaries. The principal lakes are *Windermere* (partly in Westmorland), *Coniston,* and *Esthwaite.* In Lancashire, the canal and railway systems have been, perhaps, more fully developed than in any other county. This has been rendered necessary by the ever-increasing demands of its immense commerce and cotton manufactures. Coal is the chief mineral product of the county—the extent of the coal-field being estimated at 400 sq. m. Copper, iron, and lead are also worked to a considerable extent.

Lan'caster (the fortified place on

the Lune), the county town of Lancashire, on the Lune, famous for its noble castle. Pop. 20,663.—54, 3 N. 2, 47 W.

Land's End, a lofty headland in Cornwall, the S.W. extremity of England.—50, 5 N. 5, 42 W.

Launceston, *lans'ton*, a town in Cornwall, on the Tamar. Pop. 3217.

Leamington, *lem'ing-ton*, a town in Warwickshire, pleasantly situated on the Leam, and celebrated for its mineral waters. Pop. 22,979.

Led'bury, a town in Herefordshire, with manufactures of ropes and sacking. Pop. 4226.

Leeds, a town in the W. R. of Yorkshire, the greatest seat of the woollen manufacture in the kingdom. Pop. 309,119.—53, 48 N. 1, 32 W.

Leek, a town in Staffordshire, with extensive manufactures of silks, twists, etc. Pop. 12,863.

Leicester, *les'ter*, the county town of Leicestershire, noted for its manufacture of worsted hosiery. Pop. 122,376.—52, 39 N. 1, 7 W.

Leicestershire, an inland county lying to the S. of Nottingham and Derby; it has on its E. side Rutland and Lincoln; on the S., Warwick and Northampton; and on the W., Derby, Stafford, and Warwick. Area 803 sq. m.; pop. 321,258. The surface is almost entirely covered with ranges of low hills, the most elevated point being *Bardon Hill*, 853 feet high. The principal streams are the *Soar* (a tributary of the Trent), *Wreak*, *Tame*, *Anker*, *Mease*, and *Devon*. Grazing and sheep farming, and in some places the dairy, occupy the chief attention of the Leicestershire agriculturists. In the *Melton Mowbray* district most of the famous Stilton cheese is made. The manufactures of the county are varied and important, and embrace plain and fancy hosiery, elastic goods, ribbons, lace, boots and shoes, machinery, etc.; mining also affords considerable employment.

Leight'on-Buz'zard, a town in Bedfordshire, on the Ouse, with considerable manufactures of strawplait. Pop. 5991.

Leominster, *lem'ster*, a town in Herefordshire, on the Lugg. P. 6044.

Lew'es (pasture or moist land), the county town of Sussex, on the Ouse, which is navigable for some miles above it. Here King Henry III. was defeated and made prisoner by his barons in 1264. Pop. 11,199.

Lichfield, *litsh-feeld*, an ancient and elegant city in Staffordshire, with a splendid cathedral; the birthplace of Dr Johnson and of Garrick. Pop. 8349.

Lincoln, *link'un* (derived from the British *llyn* or *lyn*, a pool or marsh, and the Latin *colonia*, a colony), the *Lindum* of the Romans, a city and bishop's see in Lincolnshire, on the Witham, with a magnificent Gothic cathedral, in which is a large bell, called Tom of Lincoln. Pop. 37,313.

Lincolnshire, a county on the E. coast, bounded on the N. by the Humber; on the W. by the counties of York, Nottingham, and Leicester; on the S. by Rutland, Northampton, and Cambridge shires; and on the E. by the North Sea. Area 2774 sq. m.; pop. upwards of 469,919. Lincolnshire is eminently a corn-growing and grazing county. The surface is mostly low and flat—the coast between the Humber and the Wash being very marshy. The county is divided into three districts, viz., the Parts of Lindsey in the N.E., including the wolds or chalk hills; the Parts of Kesteven, in the S.W.; and the Parts of Holland, in the S.E., embracing a large portion of the *Fens*. The reclaimed portion of these Fens forms one of the richest agricultural and grazing tracts in the kingdom. In those localities which have not yet been brought into cultivation, vast flocks of geese are reared, principally for their feathers. The Lincoln breeds of sheep, oxen, and horses have a high reputation, and the great horse-fairs of the county are frequented by dealers from the chief countries of Europe. The principal rivers are the *Trent*, *Ancholme*, *Witham*, and *Welland*, and several canals intersect the county in various directions.

Liskeard, *lis'kard* (the enclosure on the height), a town in Cornwall. Pop. 5591.

Liv'erpool, a city, seaport, and bishop's see in Lancashire, at the mouth of the Mersey. It has made rapid progress in commercial prosperity, and is now the chief seat of the trade with Ireland, America, and the W. Indies. It has some fine public buildings, 20 miles of quays, and wet docks covering nearly 300 acres. Pop. 552,508.—53, 24 N. 2, 59 W.

Liz'ard Point, in Cornwall, the most southerly promontory of England.—49, 58 N. 5, 12 W.

Llandaff (the church on the Taff), a village and bishop's see in Glamor-

ganshire, with the ruins of an ancient cathedral. Pop. 17,950 p.

Llanel'ly (the church of St Elian), a seaport in Carmarthenshire, near the mouth of the Burry, with a large trade in coals and copper. Pop. 19,760.

Llanfyllin, *lan-vith'lin*, a town in Montgomeryshire. Pop. 1080.

Llangollen, *lan-goth'len* (the church of St Collen), a town in Denbighshire, situated in a beautiful vale on the banks of the Dee, and surrounded by fine scenery. Pop. 3123.

Llanidloes, *lan'id-less* (the church of St Idloes), a town in Montgomeryshire, with a brisk trade in flannels. Pop. 3421.

Llantris'sent (the church of the three saints), a town in Glamorganshire. Pop. 1872.

Lon'don, the metropolis of the British empire, situated on the Thames, the wealthiest and one of the largest and most populous cities in the world. Its three principal divisions are: the City, in which its immense commerce is chiefly carried on; Westminster; and Southwark, on the southern bank of the Thames. These are connected by magnificent bridges. The most splendid edifices are St Paul's Cathedral, Westminster Abbey, the Palace of Westminster (containing the Houses of Parliament), the Law Courts, the Tower, the British Museum, Buckingham Palace, the Exchange, the Bank of England, the Mansion House, and the General Post Office. London has been so vastly extended as to embrace large adjacent villages, which have grown to the size of cities; on the north, Hackney, pop. 163,681 p.; Islington, 282,865 p.; on the east, Spitalfields, 21,340 p.; Stepney, 134,303 p.; Rotherhithe, 36,024 p.; on the south, Camberwell, 186,593 p.; on the west, Kensington, 163,151 p.; Chelsea, 88,128 p.; with several others. Pop. 3,816,483. —51, 30 N. 0, 5 W.

Loughborough, *luff'bur-o*, a town in Leicestershire, with an extensive trade in hosiery, etc. Pop. 14,803.

Louth, a town in Lincolnshire, situated on a canal which joins the Humber, with considerable trade and manufactures. Pop. 10,691.

Lowestoft, *lo'stoft*, a seaport in Suffolk, and the most easterly point of England. Pop. 19,696.—52, 29 N. 1, 45 E.

Lud'low (the people's hill), an ancient town of Shropshire, with the ruins of a stately castle. Pop. 5035.

Lu'ton, a town in Bedfordshire, on the Lea, with extensive manufactures of strawplait. Pop. 23,960.

Lyme Re'gis, a seaport in Dorsetshire, and a noted watering-place, with a good harbour. Pop. 2047.—50, 43 N. 2, 56 W.

Lym'ington, a seaport in Hants, resorted to for sea-bathing. Pop. 2410.

Lynn Re'gis, or King's Lynn (the king's pool), a flourishing seaport in Norfolk, at the mouth of the Ouse, with an extensive trade in corn. Pop. 18,539.—52, 46 N. 0, 25 E.

Mac'clesfield, a town in Cheshire, with great silk manufactures. Pop. 37,514.—53, 16 N. 2, 7 W.

Machynlleth, *ma-hunt'leth*, an ancient town in Montgomery, with manufactures of flannels and cottons. Pop. 2045.

Maid'stone, the county town of Kent, on the Medway, the great emporium of the hop trade. Pop. 29,623.

Mal'don, a seaport in Essex, at the mouth of the Chelmer, with considerable import trade. Pop. 5468.

Malmes'bury, a very ancient town in Wilts. Pop. 6881.

Mal'ton (the town of the meeting), a town in the N. R. of Yorkshire, on the Derwent. Pop. 8754.

Mal'vern, a watering-place in Worcestershire. Pop. 5846.—The Malvern Hills are a range in the S.W. of Worcestershire, and in the county of Hereford. 1396 feet high.

Man, anciently *Mona*, an island in the Irish Sea, 30 miles in length by 12 in breadth; it is 20 miles from the coast of Scotland, and nearly equidistant from England and Ireland. Pop. 54,089.—54, 15 N. 4, 30 W.

Man'chester, a city and bishop's see in Lancashire, the seat of the greatest manufactures in the world. Its staple consists in the different branches of the cotton trade, which are carried on to a vast extent. Pop. 341,414.—53, 29 N. 2, 14 W.

Mans'field (field or plain on the river Mann), an ancient town in Nottinghamshire, on the Mann. P. 13,653 p.

Mar'gate (the sea gate or passage), a seaport of Kent, in the Isle of Thanet, much frequented for sea-bathing. Pop. 16,030.—51, 23 N. 1, 22 E.

Market Har'borough, a town in Leicestershire, on the Welland. Pop. 2418.

Marl'borough, a town in Wilts, on the Kennet. Pop. 9300.

Mar'low, Great (the hill by the

marsh), a town in Bucks, on the Thames. Pop. 6778.

Ma'ryport, a seaport in Cumberland, at the mouth of the Ellen. Pop. 8126.

Mat'lock (the meat enclosure or storehouse), a town in Derby, noted for its medicinal springs. Pop. 4395.

Med'way, a river which rises in Sussex, and, flowing through Kent, falls into the Thames at Sheerness.

Me'nai Strait, between the Isle of Anglesea and Carnarvon, which are connected by magnificent suspension and railway tubular bridges, thrown over the strait.

Men'dip Hills, a noted mineral range in the N.E. of Somerset, 1094 feet high.

Merion'ethshire, a county of N. Wales, lying to the S. of Carnarvon and Denbigh; it has Montgomery on the E., Cardigan on the S., and Cardigan Bay on the W. Area 601 sq. m.; pop. 52,038. The surface is very mountainous; the most elevated chain runs from N.W. to S.E., and its highest summits are *Cader Idris* (2959 feet) and *Arran Mowddy* (2955 feet). The scenery is highly picturesque. The *Dee*, *Maw*, and *Dovey* are the principal rivers. Small lakes are numerous amid the mountains. Lake *Bala*, the largest in Wales, and from which the Dee takes its rise, is in this county. Cattle and sheep breeding, together with dairy farming, occupy the chief attention of the rural portion of the community. Minerals of various kinds abound. Gold-mines are worked in the vicinity of Dolgelly and near the S. extremity of Lake Bala. Slate-quarrying, however, is the staple occupation of the people.

Mer'sey, a river which flows between Cheshire and Lancashire, and falls into the Irish Sea at Liverpool.

Merthyr Tidvil, *mer'ther tid'vil*, a town in Glamorganshire, situated in the valley of the Taafe. From an obscure village it has been raised by its extensive iron-works to be the largest town in Wales. Pop. 48,861.—51, 45 N. 3, 20 W.

Mid'dlesborough, a modern town in the N. R. of Yorkshire, on the right bank of the estuary of the Tees. It is the centre and port of the Cleveland iron district; and although founded so recently as 1830, its population in 1881 was 55,934.

Mid'dlesex (the "Middle Saxons"), the metropolitan county of England, is, next to Rutland, the smallest of the English counties; it is, however, next to Lancashire, the most populous. Hertford forms its N. boundary; the *Lea* divides it on the E. from Essex, the *Thames* on the S. from Surrey, and the *Colne* on the W. from Bucks. Area 281 sq. m.; pop. 2,920,485. The surface consists, for the most part, of gentle undulations. A range of hills, averaging 400 feet above the level of the Thames, extends along the N. boundary; and another range skirts the N. side of London by Hornsey, Highgate, and Hampstead. The chief rivers are those forming the E., S., and W. boundaries, and the *Brent*, which is the only stream of consequence traversing the centre of the county. The *New River* supplies a large part of the metropolis with water for domestic purposes. The agricultural industry of the county is considerable, more than three-fifths of the entire area being under crops.

Mid'dleton, a town in Lancashire, between Manchester and Rochdale. Pop. 18,953.

Mid'hurst (the middle wood), a well-built town in Sussex. Pop. 7221.

Mil'ford Haven, a deep inlet of the sea in the S. of Pembrokeshire, the safest and most capacious harbour in Britain.

Mold, the county town of Flintshire. Pop. 5055.

Mon'mouth (the town at the mouth of the Monnow), the county town of Monmouthshire, at the confluence of the Wye and the Monnow, the birthplace of Henry V. Near it are the picturesque remains of Tintern Abbey. Pop. 6111.

Mon'mouthshire, a county of England, but, as regards language and manners, is essentially Welsh. Its N. boundary is Herefordshire; the counties of Brecknock and Glamorgan border it on the W.; the estuary of the Severn on the S.; and Gloucestershire on the E. Area 575 sq. m.; pop. 211,267. The scenery in most parts of the county is unusually picturesque, combining the wildness of mountain regions with the rich beauty of fertile valleys. Monmouth, especially in the W., abounds with coal, limestone, and ironstone. The chief rivers are the *Wye*, *Usk*, *Monnow*, and *Romney*. The celebrated ruins of Tintern Abbey occupy a most beautiful site on the banks of the Wye.

Montgom'ery, the county town of Montgomeryshire, near the Severn.

Its ancient castle is now a mass of ruins. Pop. 1194.

Montgom'eryshire, a county in Wales, bounded on the N. by Merioneth and Denbigh; E. by Shropshire; S. by Radnor and Cardigan; and W. by parts of Cardigan and Merioneth. Area 755 sq. m.; pop. 65,718. It possesses great variety of character in surface and soil. A large portion of the area is composed of bleak elevated moorlands; but the valleys among the mountains are fertile and well wooded. The lofty mountain *Plinlimmon* (2481 feet high) is partly in this county. The chief rivers are the *Severn*, *Wye*, *Vyrnwy*, *Tanat*, and *Dovey*. The people are mainly occupied in agricultural pursuits. Cattle, sheep, and a small breed of ponies called "merlins" are reared in large numbers. The mining industry of the co. is not very great. Slate is the most abundant mineral. The Welsh flannel manufacture is extensively carried on in various districts.

More'cambe Bay, a bay of the Irish Sea, indenting the coast of Lancashire.

Mor'peth (the moor path), a town in Northumberland, having one of the greatest cattle-markets in England. Pop. 4556.—55, 11 N. l, 42 W.

Mounts Bay, an extensive bay in the S.W. of Cornwall.

Nant'wich (the salt-works in the valley or on the brook), a town in Cheshire, on the Weaver; it was formerly noted for its salt-works. Pop. 7495.

Nar'berth, a town in Pembrokeshire. Pop. 1184.

Nase'by (the dwelling on the promontory), a parish of Northamptonshire, where the forces of Charles I. were routed by Cromwell's army in 1645. Pop. 610.

Naze, a noted promontory on the E. coast of Essex.—51, 52 N. l, 17 E.

Neath, a town in Glamorganshire, possessing a considerable trade. Pop. 10,409.

Nee'dles, a cluster of pointed rocks, at the W. extremity of the Isle of Wight.—50, 40 N. l, 34 W.

New River, a large aqueduct from Hertfordshire to Islington, by which a great part of London is supplied with water.

New'ark, a town in Nottingham, on a branch of the Trent, with an extensive trade. Pop. 14,018.

New'bury, a town in Berkshire, situated in a fertile plain, on the banks of the Kennet. Pop. 10,144.

Newcastle, *new-kas'l*, a city and bishop's see, the capital of Northumberland, about 10 miles from the mouth of the Tyne. It is a place of great trade, particularly in coals and the manufacture of machinery and glass. Pop. 145,359.—54, 59 N. l, 37 W.

Newcas'tle-under-Lyme, a town in Staffordshire, on a branch of the Trent, noted for the extensive manufactures of stoneware in its vicinity. Pop. 17,508.

Newha'ven, a seaport in Sussex, at the mouth of the Ouse, in the English Channel; it has regular steam communication with France. Pop. 4009.

Newmar'ket, a town in Suffolk, celebrated for its horse-races, the course for which is in Cambridgeshire. Pop. 5093.

New'port, the capital of the Isle of Wight, on the Medina, near the centre of the island. Pop. 9357.—A thriving seaport in Monmouth, on the Usk, possessing large docks and a very extensive trade in coal and iron. Pop. 35,313.

New'ton, a town in Montgomeryshire, on the Severn, the chief seat of the fine flannel trade. Pop. 6974.

Nore, a celebrated naval station and anchoring-ground in the Thames, off Sheerness.

Nor'folk, a large and important county on the E. coast, bounded on the N. and E. by the North Sea; on the S. by Suffolk; and on the W. by Cambridgeshire and the Wash. The name means "north folk," used relatively to Suffolk. Area 2116 sq. m.; pop. 444,749. The surface is almost level; and although the county is half encompassed by the ocean, it possesses very few seaports. At many places on the coast, sandbanks stretch far seaward, and render navigation exceedingly dangerous. The chief rivers are the *Ouse*, the *Yare* (with its affluents the *Waveney* and the *Wensum*), and the *Bure*. Mackerel and herring fishing is carried on to a great extent along the coast, especially in the neighbourhood of *Yarmouth*. Agriculture, however, forms the principal occupation of the people. The fenny portions of the county supply immense numbers of geese and turkeys, which are held in high repute.

Northal'lerton, a town in the N. R. of Yorkshire, near which the Scots, under King David I., were defeated at the battle of the Standard in 1138. Pop. 3692.

Northamp'ton, the county town of

Northamptonshire, on the Nen, with a large trade in boots and shoes. Pop. 51,881.—52, 15 N. 0, 55 W.

Northamp'tonshire, an inland county, encompassed by the shires of Rutland, Lincoln, Cambridge, Huntingdon, Bedford, Buckingham, Oxford, Warwick, and Leicester. Area 984 sq. m.; pop. 272,555. Extensive forests and well-watered wood-clad vales diversify and give picturesqueness to the scenery of this county. The *Nen* and the *Welland* are the principal rivers; both of them flow N.E. and fall into the estuary of the *Wash*. Northamptonshire is chiefly a cattle-rearing county. Dairy farms are numerous and extensive, and vast quantities of butter are produced for the London market.

Northum'berland, the most northerly of the English counties, signifies the "land north of the Humber." The Tweed bounds it on the N., separating it from the Scotch county of Berwick; the Cheviot Hills and Cumberland border it on the W., Durham on the S., and the North Sea on the E. It is somewhat triangular in shape. Area 1952 sq. m.; pop. 434,086. Surface rugged; hills in the W. and S.W. bleak, but valuable for their lead-mines. The Cheviot uplands afford pasturage to innumerable flocks of sheep and herds of cattle. *Allenheads*, the centre of the lead-mining district, is the highest inhabited spot in England, being 1400 feet above sea-level. Towards the coast and in the valleys watered by the *Coquet*, *Tyne*, *Till*, and *Aln*, the soil is fertile and well cultivated. The county derives its chief wealth from its minerals, especially coal, for the mining of which there are about 100 coal-pits in operation. The manufactures are varied and important.

North'wich (the north salt-works), a town in Cheshire, with extensive salt-mines. Pop. 1022.

Norwich, *nor'itch* (the north town), the capital of Norfolk, a city and bishop's see, with a fine cathedral; it has been long noted for its trade and manufactures. Pop. 87,842.—52, 38 N. 1, 18 E.

Not'tingham, the county town of Nottinghamshire, near the Trent; the chief seat of the hosiery and lace manufactures. Here King Charles I. set up his standard at the beginning of the civil war in 1642. Pop. 186,575.—52, 57 N. 1, 8 W.

Not'tinghamshire, or Notts, an inland county, having Yorkshire as its N. boundary; Derby on the W.; Leicester on the S.; and Lincoln on the E. Area 822 sq. m.; pop. 391,815. Except in the vale of Trent the surface is undulating, and here and there exhibiting remains of the famous forest of *Sherwood*, once the favourite resort of the noted Robin Hood. The county is watered by the *Trent* and its affluents, the *Idle* and the *Soar*. Nottinghamshire is the principal seat of the English cotton hosiery and lace manufactures.

Oakham, *ok'am*, the county town of Rutland. Pop. 3227 p.

Oldham, *old'am*, a great manufacturing town in Lancashire, on the Medlock Pop. 111,343.

Ol'ney, a town in Buckinghamshire, near which the poet Cowper long resided. Pop. 2347.

Ormes Head, Great, a promontory on the coast of Denbighshire.—53, 20 N. 3, 52 W.

Os'westry, a town in Shropshire, near the Severn and Mersey Canal, with manufactures of flannel. P. 7847.

Ot'terburn, a village in Northumberland, famous as the scene of a battle between Hotspur Percy and Douglas in 1388.

Ouse, *ooz*, the name of four rivers. The Yorkshire Ouse, formed by the junction of the Swale and Aire, unites with the Trent to form the Humber. The Great Ouse, which rises in Northamptonshire, flows through the counties of Buckingham, Bedford, Huntingdon, Cambridge, Norfolk, and falls into the sea at Lynn Regis. The Little Ouse divides Norfolk from Suffolk, and falls into the Great Ouse. The other river of this name is in Sussex.

Ox'ford, the capital of Oxfordshire, a bishop's see and the seat of a celebrated university, containing twenty colleges and five halls. Pop. 35,264.—51, 45 N. 1, 15 W.

Ox'fordshire, a midland county, surrounded by the shires of Warwick, Northampton, Buckingham, Berks, and Gloucester. Area 738 sq. m.; pop. 179,559. Ranges of low hills diversify the surface of the county, which is intersected by more streams, and is more richly wooded, than almost any other of the English counties. The principal rivers are the *Isis* or *Thames*, *Cherwell*, *Windrush*, *Thame*, *Evenlode*, and *Glyme*. In agriculture, Oxfordshire occupies a prominent position; but neither its minerals nor manufactures are of much

importance. *Witney* is famous for blankets and *Bicester* for ale. Glove and lace making are practised in various parts of the county.

Peak, a lofty mountain, or more properly district, in Derbyshire, celebrated for the extensive caverns by which it is perforated, and noted for its lead-mines.

Peel (a fortification), a seaport in the W. of the Isle of Man, with an ancient castle. Pop. 3513.

Pem'broke (the head of the district, or the headland or promontory), the county town of Pembrokeshire, on a bay of Milford Haven: near it are the remains of a great castle. Pop. 14,156. —51, 40 N. 4, 55 W.

Pem'broke Dock, or Pater, a seaport in Pembrokeshire, on Milford Haven, near the town of Pembroke; it has a government dockyard covering 60 acres.

Pem'brokeshire, a county of S. Wales, is bounded by the sea upon the N., W., and S.; and on the E. by the counties of Carmarthen and Cardigan. Area 628 sq. m.; pop. 91,824. The surface is hilly, but not mountainous, except a little in the N.E. The coast-line is deeply indented. Chief bays, *Milford Haven, St Bride's,* and *Newport;* the first named is one of the most secure and capacious harbours in Europe. The principal rivers are the *Teivy* and *Cleddau.* Farming is pursued with much spirit, and great attention is devoted to the rearing of live stock. The manufactures of Pembrokeshire are unimportant; but the fisheries on the coast are valuable; coal, silver, lead, and iron are extensively mined.

Pen'nygant, a hill in the N.W. of Yorkshire, 2270 feet high.

Pen'rith, a town in Cumberland, pleasantly situated in the vale of Inglewood forest. Pop. 9268.

Pen'ryn (the head of the promontory), a town in Cornwall, on the creek which runs into Falmouth Harbour. Pop. 3466.

Penzance', a seaport in Cornwall, remarkable for the salubrity and mildness of the air. It is situated on the N.W. side of Mount's Bay, and has a considerable trade. Pop. 12,409.—50, 8 N. 5, 32 W.

Pe'terborough, a city and bishop's see in Northamptonshire, on the river Nen. It has a fine cathedral. Pop. 21,228.

Pe'tersfield, a town in Hants. Pop. 6516

Plinlim'mon, a mountain on the borders of Montgomery and Cardigan shires, 2481 feet high.

Plym'outh, a seaport of Devonshire, the second naval station in the kingdom, situated at the head of Plymouth Sound, a capacious haven, formed by the Plym and Tamar. Pop. 73,794.—50, 22 N. 4, 10 W.

Pon'tefract, a town in the W. R. of Yorkshire, with an ancient castle, now in ruins. Pop. 8798.

Pon'typool (the pool at the bridge), a town in Monmouth, on a steep cliff overhanging a small stream. Pop. 5244.

Poole, a flourishing seaport in Dorsetshire, with a prosperous fishery. Pop. 12,310.—50, 42 N. 1, 59 W.

Port'land, Isle of, a peninsula in Dorsetshire, famous for its freestone quarries. Near the S. Point, Portland Bill, two lighthouses are erected.—50, 31 N. 2, 27 W.

Portsmouth, *ports'muth,* a seaport in Hants, the most important naval station in the kingdom. Pop. 127,989. —50, 48 N. 1, 6 W.

Pot'teries, The, a collective name applied to the towns and villages of Staffordshire engaged in the manufacture of China and earthenware.

Pres'cot, a town in Lancashire, noted for its manufacture of watch-tools and movements. Pop. 6419.

Presteign, *pres-tain'* (priest's town), the county town of Radnorshire, situated in a fertile valley, on the Lugg. Pop. 1631.

Pres'ton, a handsome town in Lancashire, on the Ribble, with large cotton manufactures. Pop. 98,537.

Pur'beck, Isle of, in the S.E. extremity of Dorsetshire, noted for its freestone quarries.

Pwllheli, *pool-he'le* (salt pool), a seaport in Carnarvonshire. Pop. 3242.

Queen'borough, a town in Kent, near the mouth of the Medway. Pop. 982.

Rad'nor, New, one of the county towns of Radnorshire, on the Somergill. Pop. 2005.

Rad'norshire, a county in S. Wales, is bounded on the N. by Montgomery and Shropshire; E. by Hereford; S. by Brecknock; and W. by Cardigan. Area 425 sq. m.; pop. 23,500. The surface is for the most part mountainous, and, except in the S.E. districts, its aspect is bleak and dreary. The *Wye, Teme, Ython, Lug,* and *Arrow* are the principal streams. The manu-

factures are of woollen and other goods for local use. The chief occupations of the people are agricultural and pastoral.

Ram'sey (the dry spot or island in the marsh), a town in Huntingdon, formerly noted for its rich and extensive abbey. Pop. 4617.—Another town in the Isle of Man, on a spacious bay. Pop. 4000.

Rams'gate, a seaport of Kent, in the Isle of Thanet, noted for its excellent artificial harbour. Pop. 22,683.—51, 20 N. 1, 25 E.

Reading, *red'ing*, the county town of Berkshire, situated at the junction of the Kennet with the Thames. Pop. 42,054.

Redditch, *red'ditch*, a town in Worcestershire, with a large trade in needles and fish-hooks. Pop. 9961.

Red'ruth, a town in Cornwall, in the vicinity of extensive copper and tin mines. Pop. 9335.

Reigate, *ri'gate*, an ancient town in Surrey. Pop. 18,662.

Ret'ford, East, a town in Nottinghamshire. Pop. 9748.

Rhuddlan, *hruth'lan* (red church), a village in Flintshire, once the largest town in North Wales. Pop. 1242.

Rib'ble, a river rising in the W. of Yorkshire, and entering the sea below Preston.

Rich'mond, a town in the N. R. of Yorkshire, with an ancient castle, picturesquely situated on the Swale. Pop. 4502.—A town in Surrey, on a hill near the Thames, commanding one of the finest views in England. Pop. 19,066.

Rip'on, a city and bishop's see in the W. R. of Yorkshire, with a fine cathedral; it was once celebrated for its manufacture of spurs. Pop. 7390.

Roch'dale, a manufacturing town, partly in Lancashire and partly in Yorkshire, on the Roche. Pop. 68,866.

Roch'ester, a very ancient city and seaport of Kent, on the Medway, with a castle and cathedral. Pop. 21,307.—51, 24 N. 0, 30 E.

Roth'erham, a town in the W. R. of Yorkshire, near the junction of the Rother with the Don, long noted for its extensive iron-works. Pop. 34,782.

Rug'by (named from its red soil), a town in Warwickshire, on the Avon, a noted railway station, 82¾ miles N.W. from London, with a celebrated school. Pop. 9891.

Run'corn, a town in Cheshire, on the Mersey, with extensive freestone quarries in the neighbourhood. Pop. 15,126.

Ru'thin, a town in Denbighshire, in the vale of Clwyd. Pop. 3033.

Rut'landshire (red land) is the smallest of the English counties, and is surrounded by Lincoln, Northampton, and Leicester. Area 150 sq. m.; pop. 21,434. The physical aspects of the county, especially in the wooded parts, are very picturesque, the surface being much diversified by ranges of gently rising hills, intersected by valleys of about half a mile in width. The county is watered by the *Welland*, *Wash*, *Wreak*, and *Chater*. Rutlandshire is chiefly a grazing county.

Ryde, a town in the Isle of Wight, beautifully situated on the N.E. coast, opposite Portsmouth. Pop. 11,461.

Rye, a seaport in Sussex, at the mouth of the Rother. Pop. 8403.

Sad'dleback, a mountain in Cumberland, 2787 feet high.

Saffron-Wal'den (the woody den where saffron was grown), a town in Essex. Pop. 6060.

St Al'bans, a city in Herts, near the site of the ancient *Verulam*. Pop. 10,931, largely employed in straw-plaiting.

St Al'ban's Head, a cape on the coast of Dorset.—50, 34 N. 2, 3 W.

St As'aph, an ancient city and bishop's see in Flint, founded about 550 by St Kentigern or Mungo, the founder of Glasgow, in Scotland. Pop. 1901.

St Bees Head, a cape on the W. coast of Cumberland.—54, 31 N. 3, 40 W.

St Bride's Bay, in St George's Channel, on the W. of Pembroke.

St Da'vids, a village in Pembroke, and a bishop's see. Pop. 2053.

St David's Head, a cape on the W. of Pembroke.—51, 53 N. 5, 18 W.

St Hel'ens, a manufacturing town of Lancashire, on a branch of the Mersey, 11 miles N.E. from Liverpool. Pop. 57,403.

St He'lier, a handsome town, the capital of the island of Jersey, situated on the E. side of St Aubin's Bay. Pop. 28,020 p.—49, 11 N. 2, 7 W.

St Ives, a seaport of Cornwall, on the Bay of St Ives. Here the pilchard-fishery is carried on to a great extent. Pop. 6445.—A town in Huntingdon, on the Ouse. Pop. 3002.

St Leonards-on-Sea, *len'ards*, a favourite watering-place in Sussex. Pop. 7165.

St Neots, a town in Huntingdonshire, on the Ouse. Pop. 4261.

St Pierre', or **Peter-le-Port**, the capital of Guernsey, in the E. of the island. It has a good harbour with a noble pier. Pop. 16,658.—49, 25 N. 2, 35 W.

Sal'ford (the willow ford), a township in Lancashire, a suburb of Manchester. Pop. 176,235.

Salisbury, *sawlz'ber-e*, an ancient city and bishop's see, the capital of Wilts. Its cathedral, the spire of which is 404 feet high, is one of the finest in Europe. Pop. 14,792.—51, 5 N. 1, 47 W.

Sal'op. *See* **Shropshire**.

Sand'wich, a seaport in Kent, on the Stour. Pop. 2846.

Sark, a small island off the French coast, between Jersey and Guernsey, with lead-mines. Pop. 578.—49, 25 N. 2, 26 W.

Sca'fell, a mountain in Cumberland, with two peaks, 3092 and 3229 feet high.

Scar'borough (the town on the cliffs or rocks), a seaport in the N. R. of Yorkshire, and a favourite watering-place, with considerable trade; it is much admired for the beauty of its situation. P. 30,504.—54, 17 N. 0, 23 W.

Scil'ly Isles, supposed to be the *Cassiterides* of the ancients, a numerous group, stretching westward from the Land's End, of which 5 only are inhabited. The principal is St Mary's. Total pop. 2320.—49, 58 N. 6, 15 W.

Sel'by, a thriving town in the W. R. of Yorkshire, on the Ouse, with a considerable trade. Pop. 6046.

Sev'ern, a large river, second only to the Thames. It rises in Plinlimmon mountain, and passing, by a circuitous course, through the counties of Montgomery, Salop, Worcester, and Gloucester, falls into the Bristol Channel. The Great Western Railway Company have constructed a tunnel under the river at New Passage Ferry, about 10 miles N.W. of Bristol.

Shaftesbury, *shafts'ber-e* (the town on the summit of a hill), an ancient town in Dorsetshire. Pop. 2312.

Sheerness', a great naval station in Kent, at the mouth of the Medway, with a strong and commanding fortress. Pop. 14,286.—51, 27 N. 0, 44 E.

Shef'field, a town in the W. R. of Yorkshire, famous for its manufactures of cutlery and plated goods. Pop. 284,508.—53, 24 N. 1, 30 W.

Shep'pey, an island at the mouth of the Thames and Medway, separated from the mainland of Kent by an arm of the sea called the Swale.

Sher'borne, an ancient town in Dorsetshire, pleasantly situated on the Ivel. Pop. 5322.

Shields—North Shields in Northumberland, and **South Shields** in Durham, two towns on the opposite banks of the Tyne, both places of considerable trade. Pop. of North Shields, 7250; of South Shields, 56,875.—55, 0 N. 1, 26 W.

Shoreham, New, *shor'am* (the dwelling or town on the sea-shore), a town in Sussex, on the English Channel. Pop. 3505.

Shrewsbury, *shroz'ber-e*, the county town of Salop, on the Severn. Here Henry Percy, surnamed Hotspur, was defeated and slain by King Henry IV. in 1403. Pop. 26,478.

Shrop'shire, or **Sal'op**, an inland county, remarkable for its mineral wealth; it is bounded on the N. by Chester; W. by Denbigh, Montgomery, and Radnor; S. by Hereford and Worcester; and E. by Stafford. Area 1290 sq. m.; pop. 248,014. The scenery of Salop is of a varied character. The N. portion is comparatively level, and is under tillage; the S. is mountainous. The *Severn* traverses the centre of the county, and is bordered by fine meadow land. Among the tributaries of the *Severn* are the *Mede, Perry, Warf, Rea,* and *Corve*. The manufactures of Salop embrace glass, stoneware, carpets, linens, gloves, paper, and hardwares.

Sil'loth, a watering-place on the Solway Frith, co. Cumberland.

Skid'daw, a mountain in Cumberland, 3022 feet high.

Snea'fell, a mountain near the centre of the Isle of Man, 2004 feet high.

Snow'don, in Carnarvon, the loftiest mountain in South Britain, 3590 feet high.

Sol'way Firth, a large bay projecting from the Irish Sea north-eastward between England and Scotland. It extends inland about 40 miles.

Som'ersetshire, a maritime county, lies open to the Bristol Channel on the N.W.; its other boundaries are the counties of Gloucester, Wilts, Dorset, and Devon. Area 1636 sq. m.; pop. 469,109. The surface is much diversified, the most prominent features being the *Mendip Hills* and the range of which the *Quantock Hills* form a part. These divide the county into three portions, in the N. of which are the rivers *Yeo* and *Avon:* in the centre the *Brue, Par-*

ret, and *Axe;* and in the W. the *Tone* —all flowing into the Bristol Channel. Along the slope and base of the hills the land is well cultivated; but towards the coast are the fenny districts known as the Marshes. Somersetshire excels in agricultural produce. The manufactures are very varied. The county contains the cities of *Bath, Wells,* and part of *Bristol.*

Southamp'ton, a seaport in Hants, at the mouth of the Itchen, at the head of Southampton Water. Pop. 60,051.—50, 54 N. 1, 24 W.

Southwark, *south'ark,* commonly called *the Borough,* a town in Surrey, united by several bridges with London, of which it is now considered a portion. Pop. 221,946.

Spit'head, a well-known roadstead between Portsmouth and the Isle of Wight, capable of containing 1000 vessels in security.—50, 46 N. 1, 10 W.

Spurn'head, a promontory in the S.E. of Yorkshire, on which is a lighthouse.—53, 34 N. 0, 7 E.

Staf'ford, the county town of Staffordshire, with extensive manufactures of boots and shoes. Pop. 19,977.

Staf'fordshire, an important county enclosed by Cheshire, Salop, Worcester, Warwick, Leicester, and Derby. Area, 1138 sq. m.; pop. 981,013. Most part of the centre is level, interspersed here and there with gently rising eminences. The tracts in the N. and N.E. are hilly, and consist chiefly of wild moorland. The district known as the *Potteries* (about 8 miles long by 3 miles broad) is in the N. South Staffordshire is called the *Black Country,* because for many miles the surface is so cut up by collieries and iron-works that there is no cultivation. The county is watered by the *Trent* and its tributaries, the *Sow, Tame, Blythe, Churnet,* etc. Although agriculture is pursued with much energy, and employs a large number of the population, Staffordshire is a mining and manufacturing rather than an agricultural county. Its porcelain and earthenware have acquired a world-wide celebrity for their excellence and beauty; and its iron goods, from nails to steam machinery, are also widely known.

Sta'lybridge, a manufacturing town, partly in Cheshire and partly in Lancashire, near the Tame. Pop. 22,785.

Stam'ford, an ancient town in Lincolnshire, on the Welland. Pop. 8773.

Start Point, a cape on the S. coast of Devonshire.—50, 13 N. 3, 38 W.

Stil'ton, a village in Huntingdonshire, where the cheese known by its name was first sold.

Stock'port, a manufacturing town in Cheshire, on the Mersey. Pop. 59,552.—53, 25 N. 2, 9 W.

Stock'ton-upon-Tees, a town in Durham, on the Tees, with considerable trade. Pop. 41,015.—54, 35 N. 1, 19 W.

Stoke-upon-Trent, a town in Staffordshire, with a large manufacture of earthenware. Pop. of town, 19,261; of parliamentary borough, 152,394.

Stone'henge, on Salisbury Plain, in Wilts, a range of immense stones, some upright, and others resting upon them, supposed by some to be a sepulchral monument, and by others to be the remains of a Druidical temple.

Stour'bridge, a town in Worcestershire, on the Stour, noted for the manufacture of glass. Pop. 9757.

Strat'ford-on-A'von, a town of Warwickshire, where Shakspeare was born in 1564. Pop. 8054.

Stroud, a town in Gloucestershire, with an extensive cloth trade, the waters of the Stroud and Slade being celebrated for their properties in dyeing cloth. Pop. 7848.

Strum'ble Head, a cape in the N.W. of Pembrokeshire.—52, 2 N. 5, 4 W.

Sud'bury (the south town), a town in Suffolk, on the Stour, once a place of great importance for its woollen manufactures. Pop. 6584.

Suf'folk (the "south folk," used relatively to Norfolk) is a maritime county, bounded on the N. by Norfolk; on the W. by Cambridgeshire; on the S. by Essex; and on the E. by the North Sea. Area 1481 sq. m.; pop. 356,893. The surface is similar to that of Norfolk. The *Stour,* the *Waveney,* the *Ouse,* the *Orwell,* and the *Blyth* are the chief rivers. The manufactures of Suffolk are of secondary importance; in the making of agricultural implements, however, it holds a high rank—*Ipswich, Stowmarket,* and *Bury St Edmunds* sending out large numbers of steam cultivators, ploughs, etc., to all parts of the world. Great care is given to the rearing of cattle, sheep, and pigs.

Sun'derland, a seaport in Durham, on the Wear, over which is an iron bridge of 237 feet span, and 100 feet above the river. Pop. 116,542.

Sur'rey (from the Saxon *Suth-rice,* the south kingdom), a county in the S. of

England, lying to the W. of Kent; the Thames, forming its N. boundary, separates it from Middlesex; the counties of Berks and Hants flank it on the W.; and Sussex on the S. Area 748 sq. m.; pop. 1,436,899. The surface of the county is beautifully diversified by hill and dale. Most of the land is under tillage, and in the vale of *Farnham* hops of the finest quality are raised. Except in *Southwark, Lambeth,* and elsewhere near London, manufactures are of little importance. Besides its boundary river the *Thames*, the *Wey* is the only other stream in the county worth mentioning. The famous Magna Charta was signed by King John at Runnimede, near Egham, on the borders of this county.

Sus'sex (from *Suth-seaxe,* South Saxons), a county bounded on the N. by Kent and Surrey; on the W. by Hampshire; on the S. by the English Channel; and on the E. by Kent. Area 1464 sq. m.; pop. 490,505. A range of chalk hills called the *South Downs* traverses the county from W. to E., and ends in the lofty cliff of *Beachy Head.* These downs are covered by fine short turf, on which about 300,000 of the famous Southdown breed of sheep are pastured. North of this chain of hills is the fertile and richly-wooded district called the *Weald.* The rivers of Sussex are small, the chief being the *Rother, Arun, Adur,* and *Ouse.* The manufactures of the county are only of local importance. Most of the towns on the coast, such as *Brighton* and *Hastings,* are favourite resorts as watering-places. It was on the Sussex coast that the Normans under William the Conqueror landed in 1066.

Swan'sea, a seaport in Glamorganshire, situated on a fine bay of the Bristol Channel. It is much resorted to for sea-bathing, and has a large trade in copper, iron, and coals. Pop. 65,597.—51, 37 N. 3, 55 W.

Tam'worth (farm or estate on the Tame), a town in Staffordshire, on the Tame. Pop. 4891.

Taun'ton, a town in Somersetshire, on the Tone. Pop. 16,614.

Tav'istock, a town in Devonshire, on the Tavy, the birthplace of Sir Francis Drake. Pop. 6879.

Tees, a river which rises in Crossfell, Cumberland, and, flowing eastward, divides the counties of Durham and York, and falls into the North Sea 10 miles below Stockton.

Ten'by, a town in Pembrokeshire, much resorted to for sea-bathing. Pop. 4750.

Test, a river in Hampshire, falling into Southampton Bay.

Tewkesbury, *tewks'ber-e,* a fine old town of Gloucestershire, on the Severn, the scene of a famous battle in 1471, in which the Yorkists, commanded by Edward IV., defeated the Lancastrians. Pop. 5100.

Thames, *temz,* the chief river in Britain, rises in Gloucestershire, separates Berks from Oxford and Buckingham, Surrey from Middlesex, and Kent from Essex, and falls into the North Sea 46 miles below London Bridge.

Than'et, Isle of, a district of Kent, at the mouth of the Thames, separated from the mainland by the Stour on the S. It contains two popular watering-places, *Margate* and *Ramsgate.* Pop. 50,022.

Thet'ford, an ancient town in Norfolk, on the Little Ouse. Pop. 4166.

Thirsk, a town in the N. Riding of Yorkshire. Pop. 4032.

Tiv'erton, a town in Devonshire, at the confluence of the Exe and the Loman. Pop. 10,462.

Torbay', a commodious bay on the coast of Devon, where William III. landed in 1688.—50, 26 N. 3, 30 W.

Torquay, *tor-ke',* a seaport in Devonshire, beautifully situated on Torbay, and much frequented as a watering-place. Pop. 24,767.

Totnes', a small thriving town in Devonshire, on the Dart. Pop. 4073.

Tred'egar, a town in Monmouthshire, famous for its coal-mines and iron-works. Pop. 18,771.

Trent, a large river which rises in the N. of Staffordshire, flows through the shires of Derby, Nottingham, and Lincoln, and unites with the Yorkshire Ouse in forming the Humber.

Trow'bridge, a town in Wilts, on the Were, with manufactures of cloth and cassimeres. Pop. 11,040.

Tru'ro, a city of Cornwall, in a deep dell at the confluence of the Kenwyn and the Allen. Pop. 10,619.

Tun'bridge, a town in Kent, on the Medway. Pop. 9317.

Tun'bridge Wells, a town in Kent, bordering on Sussex, noted for the mineral waters in its vicinity. Pop. 24,308.

Twickenham, *twik'en-am,* a town in Middlesex, on the Thames, surrounded by villas. Here was the residence of the poet Pope. Pop. 12,479.

Tyne, the principal river of North-

umberland, is formed by the junction of the North and South Tyne, and falls into the North Sea.

Tyne'mouth, an ancient town in Northumberland, at the mouth of the Tyne. Pop. 44,118.

Ulls'water, a lake between Cumberland and Westmorland.

Ux'bridge, a town in Middlesex. Pop. 7669.

Vent'nor (the shore of *Gwent*, or the shining shore), a fashionable watering-place on the S. coast of the Isle of Wight, Hampshire. Pop. 5504.

Wake'field (the field by the way-side), a manufacturing town in the W. R. of Yorkshire. Pop. 30,854.—53, 41 N. 1, 29 W.

Wal'lingford (the ford at the old fort), a town in Berks, on the Thames. Pop. 2803.

Walsall, *wol'zel*, a town in Staffordshire, with extensive iron-works, etc. Pop. 58,795.

Ware, a town in Hertfordshire, on the Lea. Pop. 5277.

Wareham, *ware'am*, a town in Dorsetshire, near the mouth of the Frome. Pop. 2112.

War'minster (the monastery near the weir), a town in Wiltshire. Pop. 5640.

War'rington, a manufacturing town in Lancashire, on the Mersey. Pop. 41,452.—53, 23 N. 2, 35 W.

War'wick (the fortress town), the county town of Warwickshire, on the Avon. Pop. 11,800.

Warwickshire, an important midland county, which Stafford and Leicester bound on the N.; Northampton on the E.; Oxford and Gloucester on the S.; and Worcester on the W. Area 881 sq. m.; pop. 737,339. The scenery of the county is eminently beautiful. The soil is fertile, and is nearly all under tillage or in meadows and pastures. Its N. part was in former times the celebrated Forest of Arden. The chief rivers are the *Avon, Tame, Leam, Rea, Stour, Alne, Arrow, Anker, Blythe, Swift, Dene*, and *Itchen*. The manufactures are important.

Wash, a large bay of the North Sea, laving the counties of Lincoln, Cambridge, and Norfolk.

Wear, a river which rises in the W. of Durham, and, after a circuitous course, falls into the North Sea between Sunderland and Monkwearmouth.

Wednesbury, *wens'ber-e*, an ancient town in Staffordshire, near the source of the Tame, 8 miles N.W. from Birmingham. Pop. of town 24,566; of parliamentary borough 124,437.

Wee'don, a village in Northamptonshire, on the London and North-Western Railway; it has extensive barracks. Pop. 1957 p.

Wel'lington, a town in Shropshire, near Shrewsbury Canal. Pop. 6360.—A town in Somersetshire, with manufactures of serges, druggets, etc. Pop. 6217.

Wells, a city in Somersetshire, situated at the base of the Mendip Hills. Pop. 4634.

Welsh'pool, a town in Montgomeryshire, pleasantly situated in the vale of the Severn, and a great market for flannels. Pop. 7107.

Wen'lock, a town in Salop. Pop. 18,442.

West'bury, a town in Wilts. Pop. 6014.

West'minster, a city in Middlesex, adjoining London, of which it may be considered a part, although it possesses distinct rights and privileges. Pop. 229,238.

West'morland, a county in the N. of England. Like Cumberland, its northern boundary, it is celebrated for its lake scenery. Lancashire bounds it on the W. and S., and Yorkshire on the E. Area 758 sq. m.; pop. 65,010. Surface very mountainous, with large and numerous tracts of moorland, from which the county derives its name. The principal mountain summits are *Helvellyn* (partly in Cumberland), *Bowfell*, and *Crowfell*. The lakes, especially *Windermere*, are remarkable for their beauty. The *Eden* in the N., and the *Kent* in the S., are the chief streams. Great numbers of geese and swine are reared for exportation. Sheep and cattle are also extensively bred for the supply of southern markets.

Wey'mouth, a seaport in Dorsetshire, united to **Melcombe Regis** by a bridge over the Wey. Pop. 13,715.

Whern'side, a mountain in the N. W. of Yorkshire, 2414 feet high.

Whit'by, a seaport in the N. R. of Yorkshire, famed for its jet. Pop. 14,086.—54, 29 N. 0, 36 W.

Whiteha'ven, a thriving seaport in Cumberland, with extensive coal-mines. Pop. 19,295.—54, 33 N. 3, 35 W.

Wig'an, a manufacturing town in Lancashire. Pop. 48,194.

Wight, Isle of (the *Vectis* of the Romans), a beautiful island off the S. coast of England, between which and Portsmouth is the great naval road of Spithead. In the centre of the island

is Carisbrooke Castle, where Charles I. was confined. Pop. 73,633.—50, 42 N. 1, 20 W.

Wig'ton (holy town), a town in Cumberland, with cotton manufactures. Pop. 3948.

Wil'ton (town on the Willy), a town of Wilts, long noted for its manufacture of carpets. Pop. of parliamentary borough 8802.

Wilts, or **Wilt'shire,** is an inland county, surrounded by Dorset, Somerset, Gloucester, Berks, and Hants. Area 1351 sq. m.; pop. 258,965. Its centre is occupied by the table-land of *Salisbury Plain*, on which are situate the celebrated Druidical remains called Stonehenge. The rivers *Avon* and *Kennet*, and some affluents of the Thames, have their rise in Salisbury Plain. In the N. and S. much of the soil is highly fertile. More attention, however, is given to dairy farming than to tillage. On the downs in the S. about 700,000 sheep are pastured, and in many places of the county pigs are reared in large numbers. The manufacturing industry of Wilts is important and varied.

Win'chester, the capital of Hants, an ancient city and bishop's see, with a spacious cathedral and famous public school. Here Alfred the Great was buried in 901. Pop. 17,780.

Win'dermere, the largest lake in England, between Westmorland and Lancashire.

Wind'sor, a town in Berkshire, on the Thames, 22 miles from London, celebrated for its castle, the chief residence of the British sovereigns. Pop. 12,273.

Wis'beach, a town in Cambridgeshire, on the Nene, carries on a large trade in corn. Pop. 9249.

With'am, a river in Lincolnshire, which flows past Lincoln, and, pursuing a south-easterly course, falls into the Wash.

Wit'ney, a town in Oxfordshire, noted for its manufacture of woollens, particularly blankets. Pop. 3017.

Wit'tleseamere, a lake in the N.E. of Huntingdonshire, now drained.

Wo'burn, a town in Bedfordshire. Within a mile of it is Woburn Abbey, the splendid seat of the Duke of Bedford. Pop. 1316 p.

Wolverhamp'ton, a town in Staffordshire, celebrated for its manufactures of locks and keys. Pop. of municipal borough 75,766; of parliamentary borough 164,332.—52, 35 N. 2, 7 W.

Wood'bridge, a town in Suffolk, on the Deben, carries on a considerable trade. Pop. 4544.

Wood'stock (a woody place), a town in Oxfordshire, with extensive manufactures of gloves. Near it is Blenheim, the magnificent seat of the Duke of Marlborough. Pop. 7033.

Woolwich, *wool'itch*, or *wool'idj*, a town in Kent, on the Thames, 8 miles below London. It is famous for its extensive arsenal and military academy. Pop. 36,665.—51, 30 N. 0, 3 E.

Worcester, *woos'ter*, the capital of Worcestershire, and a bishop's see, noted for its porcelain manufacture. Here Cromwell defeated the army of Charles II. in 1651. Pop. 33,956.—52, 12 N. 2, 13 W.

Worcestershire, *woos'ter-shĭr*, a midland county, encompassed by Salop, Stafford, Warwick, Gloucester, and Hereford. Area 738 sq. m.; pop. 380,283. The county is fertile, well watered, and richly wooded. It is level in the centre, and hilly towards the E. and W. sides. The *Severn*, *Avon*, *Stour*, *Teme*, and *Salwarp* are the chief rivers. Wheat is grown to a great extent; hop-gardens are plentiful; and from the produce of the numerous orchards vast quantities of cider and perry are made. Coal and iron mines are largely worked, and glass and iron wares are extensively manufactured.

Work'ington, a seaport in Cumberland, with extensive collieries in the neighbourhood. Pop. 13,308.—54, 38 N. 3, 33 W.

Work'sop, a town in Nottinghamshire. Pop. 11,625.

Worms Head, a cape in Glamorganshire.—51, 34 N. 4, 20 W.

Worth'ing (a farm, manor, or estate), a seaport and watering-place in Sussex. Pop. 10,976.

Wrek'in, a hill in Shropshire, 1320 feet high.

Wrexham, *rex'am*, a town in Denbighshire. Pop. 10,978.

Wy'combe, High, a handsome town in the county of Buckingham. Pop. 10,618.

Wye, a picturesque river of Wales, which rises in the S. of Montgomeryshire, crosses Radnor and Hereford shires, divides Monmouth from Gloucester, and falls into the Severn below Chepstow.

Yar'mouth, a seaport of Norfolk, at the mouth of the Yare, with a flourishing trade. Pop. 46,159.—52, 36 N. 1, 43 E.

ENGLAND AND WALES.

Yeo'vil (the town on the Yeo), a town in Somersetshire, on the Yeo or Ivel, with a considerable manufacture of gloves. Pop. 8479.

York, the *Eboracum* of the Romans, the capital of Yorkshire, and the see of an archbishop, on the Ouse, 22 miles N.E. of Leeds. Its celebrated cathedral or minster is one of the best and most perfect examples of Gothic or pointed architecture in Europe. Pop. 49,530.—53, 57 N. 1, 4 W.

York'shire, the most extensive county in England, lies to the S. of Durham, from which it is separated by the river Tees. Westmorland and Lancashire bound it on the W.; Derby, Nottingham, and Lincoln on the S.; and the North Sea on the E. Area 5985 sq. m.; pop. 2,886,564. The county is divided into three ridings (North, East, and West), and the Ainsty or Liberty of the city of York. Each riding may be regarded as a separate county, having a civil and military jurisdiction distinct from the others. The **North Riding** contains the rich agricultural districts of *Cleveland* and *Ryedale*, and is chiefly famous as a grazing country. The principal rivers are the *Tees, Swale*, and *Ure*. The **East Riding** comprises the hilly district called the *Wolds*, which extends from N. to S. through nearly the whole riding. Here agriculture is very extensively carried on. The *Hull, Ouse*, and *Derwent* are the chief rivers. All the S. and W. parts of the county are embraced in the **West Riding**, which contains some of the most fertile tracts and most picturesque scenery in England. The N. part is traversed by a range of lofty hills, the highest summit of which is *Whernside*, 2414 feet above the level of the sea. This riding has been pronounced one of the greatest manufacturing districts in the world. This division of Yorkshire is intersected by the rivers *Wharfe, Calder, Aire, Don*, and *Ribble*; and numerous canals and lines of railway connect all the large towns.

SCOTLAND

Is bounded N. by the Atlantic Ocean; W. by the Atlantic Ocean and North Channel; S. by England, the Solway Firth, and Irish Sea; E. by the North Sea.

It contains 30,463 square miles. The population in 1881 was 3,736,000.

It is divided into thirty-three counties:—

Counties.	Chief Towns.
Orkney & Shetland	Kirkwall, Stromness, Lerwick.
Caithness	Wick, Thurso.
Sutherland	Dornoch, Golspie.
Ross	Dingwall, Tain, Fortrose, Stornoway (in the island of Lewis).
Cromarty	Cromarty.
Inverness	Inverness, Fort George, Fort Augustus, Fort William.
Nairn	Nairn.
Elgin or Moray	Elgin, Forres, Fochabers.
Banff	Banff, Cullen, Keith.
Aberdeen	Aberdeen, Peterhead, Fraserburgh, Inverury, Huntly.
Kincardine	Stonehaven, Bervie, Laurencekirk.
Forfar	Forfar, Dundee, Broughty Ferry, Montrose, Arbroath, Brechin, Kirriemuir.
Fife	Cupar, St Andrews, Dunfermline, Kirkcaldy, Burntisland, Falkland, Newburgh.
Kinross	Kinross.

Counties.	Chief Towns.
Clackmannan	Clackmannan, Alloa, Dollar.
Perth	Perth, Dunkeld, Crieff, Kincardine, Dunblane, Callander, Blairgowrie.
Argyll	Inveraray, Campbeltown, Oban.
Bute	Rothesay, Brodick (in Arran).
Dumbarton	Dumbarton, Helensburgh, Kirkintilloch.
Stirling	Stirling, Falkirk, Grangemouth, Bannockburn.
Linlithgow or West Lothian	Linlithgow, Queensferry, Borrowstounness, Bathgate.
Edinburgh or Mid-Lothian	EDINBURGH, Leith, Portobello, Musselburgh, Dalkeith.
Haddington or East Lothian	Haddington, Dunbar, North Berwick.
Berwick	Greenlaw, Duns, Coldstream, Lauder.
Roxburgh	Jedburgh, Kelso, Hawick, Melrose.
Selkirk	Selkirk, Galashiels.
Peebles	Peebles, Innerleithen.
Lanark	Lanark, Carstairs, Glasgow, Hamilton, Airdrie, Coatbridge, Rutherglen.
Renfrew	Renfrew, Paisley, Greenock, Port-Glasgow.
Ayr	Ayr, Kilmarnock, Irvine, Ardrossan, Stewarton.
Dumfries	Dumfries, Annan, Moffat, Langholm.
Kirkcudbright	Kirkcudbright, Castle Douglas.
Wigtown	Wigtown, Stranraer, Whithorn, Portpatrick, Newton-Stewart.

Islands.—Shetland Isles, the principal of which are, Mainland, Yell, and Unst; Orkney Isles, the principal of which are, Pomona or Mainland, and Hoy; the Hebrides or Western Isles, the principal of which are, Lewis and Harris, Skye, Mull, Staffa, Iona, Jura, Islay, Bute, Arran, Tiree, Coll, Eigg, Rum, St Kilda.

Bays.—Pentland, Dornoch, Cromarty, and Moray Firths; Firths of Tay and Forth, Solway Firth, Firth of Clyde; Wigtown and Luce Bays; Sounds of Islay, Jura, and Mull; the Minch; Lochs Ryan, Long, Fyne, Etive, Linnhe, Broom.

Capes.—St Abb's Head, Fifeness, Buchanness, Kinnaird's Head, Burgh Head, Tarbetness, Duncansby Head, Dunnet Head, Cape Wrath, Butt of Lewis, Point of Ardnamurchan, Mull of Cantire, Corsill Point, Mull of Galloway, Burrow Head, Southerness.

Lakes.—Lochs Leven; Lomond; Awe; Tay, Rannoch, Ericht; Katrine, Earn; Shin; Laggan; Ness, Lochy; Maree.

Mountains.—The Grampians, to which belong Ben Nevis, Ben Macdhui, Braeriach, Cairntoul, Cairngorm, Lochnagar, Ben Aven, Schiehallion, Ben Lawers, Ben More, Ben Ledi, Ben

Lomond, Ben Cruachan, Ben Attow; Ben Dearg, Ben Wyvis; the Ochils; the Pentland Hills; the Lammermuir Hills; the Eildon Hills; Tinto; Moffat Hills, the Lowthers, the Leadhills; the Cheviot Hills.

Rivers.—Spey, Findhorn, Deveron, Don, Dee, North and South Esk, Tay, Forth, Clyde, Tweed, Nith, Esk, Annan, Dee, Ken.

REMARKS.

Scotland, exclusive of the Shetland and Orkney Islands and of the Hebrides, extends from 54° 38′ to 58° 40′ N. lat., and from 1° 46′ to 6° 5′ W. long. Its extreme length is about 280 miles, and its greatest breadth 150 miles.

The coasts are bold and rocky, except on the east side from Aberdeen to Tarbet Ness, where the coast is both low and sandy; and they are so deeply indented, particularly on the western side, that no spot is more than forty miles distant from the sea. Arms of the sea and estuaries subserve what may be called inland navigation; for the rivers themselves, where they cease to be tidal, are no longer navigable. In furtherance of inland navigation, art has seconded nature: a ship-canal of only 30 miles, or thereabout, joins the estuaries of Forth and Clyde; the Caledonian Canal, uniting a series of lakes, very long in proportion to their breadth, which succeed each other from Fort-William to Inverness, has created a navigable channel between the North Sea and the Atlantic; and very great service is rendered by the short Crinan Canal, which unites Loch Fyne and the Sound of Jura.

The interior of Scotland has none of the long open valleys and wide undulating plains that are met with in England. The Carses, as they are called, of Stirling and of Gowrie, in Perthshire, are level and fertile, but of comparatively limited extent. Scotland may be described in three divisions—southern, northern, and central. The first of these divisions, for the most part hilly and pastoral, consists of all the country south of the Lammermuir and Pentland Hills, and of a line in continuation of these, passing through Carstairs in Lanarkshire to the town of Ayr. The northern division consists of all the country west of the Firth of Clyde and north of a line drawn from Dumbarton to Aberdeen. This division is mountainous except along the east coast, and is given up either to pasture or to deer-forests; and this mountainous part it is which forms the Highlands. Arran, though situated farther south than Berwick-on-Tweed, is in the Highlands; Caithness, in the extreme north, is not. The Highlands contain both the highest mountains and the greatest depression in the United Kingdom. The depression is Glenmore, *i.e.*, Great Glen, through which runs the Caledonian Canal; and the mountains are those of the Grampian range, which, spreading out in a south-westerly direction from near Aberdeen, covers the whole country south of Glenmore to the western

coast. The chief mountain-knot is formed where the counties of Aberdeen, Banff, and Inverness meet; and Ben Macdhui, one of the summits of this knot, is only 110 feet lower than the highest of all, Ben Nevis, 4406 feet, near Fort William.

The central division, though the least of the three, is by far the wealthiest, and contains about three-fifths of the population; the reason is that here are the coalfields of Fifeshire, Lanarkshire, and Ayrshire, with some of the largest iron-works in the United Kingdom, and almost all the factories in Scotland. The only manufacture carried on to any extent outside the central division is that of tweeds, which is most active in Galashiels, Hawick, and Dumfries, towns in the southern and pastoral division. Within the central division, Glasgow and Paisley are the principal seats of the cotton trade; Dundee and other towns in Forfarshire manufacture jute and coarse linens; Dunfermline, damasks and fine linens; Kilmarnock, tartans; Bannockburn, carpets; Kirkcaldy, floor-cloth; and Aberdeen, a great variety of articles, chiefly woollen, cotton, and linen. The Clyde ports are famous for ship-building, particularly for the construction of iron steamers. One consequence of this industrial pre-eminence is that the central division contains the only towns in Scotland with a population above 100,000, viz., Glasgow, Edinburgh, Dundee, and Aberdeen.

Fisheries are of great importance to Scotland. Salmon fishing is carried on all round the coasts and up the rivers, among which the Tay is pre-eminent; but the most important is the herring-fishery, pursued on both coasts, but especially on the east coast, with Wick in Caithness for its chief seat.

The public sentiment in Scotland is democratic compared with that of England: there is more self-assertion, because there is less respect for rank and authority. Much oftener than in England does the able boy pit the aristocracy of intellect against the aristocracy of wealth and station. Ever since John Knox got a school established in every parish, such boys have had at hand the opportunity of learning; and the opportunity is continued at the universities, which allow the students to live in the university towns where and how they please or can. The democratic sentiment is at once expressed and confirmed by the Presbyterian system of church-government, introduced at the Reformation, and continued to this day, both in the Established Church and in the Free and United Presbyterian Churches, which together compete in numbers with the Established Church.

In another department, Scotland and the Scotch are under unspeakable obligations to Sir Walter Scott. By his descriptions of Scottish scenery and his charming reproduction in story of the semi-barbarous life led by the Borderers up to the union of the crowns of England and Scotland, and by the Highlanders for a century later, he made the country and the people interesting to all readers of English. Crowds came to satisfy their curiosity by identifying sites, and noting traces of ancient manners;

and, if they did not find exactly or certainly what they sought, they took back a report which brought next year still greater crowds of money-spending tourists. The Highlands proved the great attraction; and the general verdict was confirmed by Royalty, when Balmoral Castle, on Deeside, Aberdeenshire, was made the Sovereign's mountain-home. Few landscapes, indeed, can be more beautiful than the Trossachs and Loch Katrine, or more desolate than the moor of Rannoch, both in Perthshire; grander than Loch Lomond, Loch Awe, or Loch Maree; more lonely and savage than Loch Coruisk, at the foot of the Coolin Mountains, in Skye.

EXERCISES.

What are the boundaries of Scotland? What is its extent in square miles? Into how many counties is it divided? Name them. What are the principal towns of Orkney and Shetland? Of Caithness? Of Sutherland? Of Ross? etc. What are the principal islands? Point them out on the map. Name the principal firths, bays, and lochs. Point them out on the map. Name the capes. Point them out on the map. What are the principal lakes? Point them out. Name the principal mountains. Name the rivers.

Where are Falkland, Kirkwall, Kelso, Whithorn, Campbeltown, Dornoch, Stranraer, Irvine, Castle-Douglas, Dalkeith, Kilmarnock, Dunkeld, Falkirk, Dingwall, Stonehaven, Montrose, Fortrose, Fort George, Port Patrick, Dunbar, Dumbarton, Duns, EDINBURGH, Glasgow, Greenock, North Berwick, Annan, Dunfermline, Alloa, Lerwick, Brodick, Inveraray, Inverness, Hamilton, Leith, Musselburgh, Borrowstounness, Forres, Bervie, Peterhead? etc.

Where are Pomona, Yell, Mainland, Mull, Skye, Lewis, Hoy, Bute? etc. Where are the Solway Firth, Luce Bay, Pentland Firth, Firth of Tay, Wigtown Bay, Firth of Forth, Cromarty Firth, Moray Firth, Loch Fyne, Loch Broom, Loch Long, Firth of Clyde, Loch Etive, Loch Linnhe? etc.

Where are Cape Wrath, Tarbetness, St Abb's Head, Southerness, Kinnaird's Head, Corsill Point, Duncansby Head, Point of Ardnamurchan? etc.

Where are Loch Ness, Loch Awe, Loch Lomond, Loch Maree, Loch Katrine, Loch Ericht? etc.

Where are the Lammermuir Hills, the Pentland Hills, the Grampians, Ben Ledi, Ben Lawers, Ben Nevis, Tinto, the Eildon Hills? etc.

Describe the course of the Tweed, of the Nith, the Clyde, the Tay, the Forth, the Don, the Spey, the Dee, the Teviot, the Annan.

At what one place is the coast low and sandy? What fact results from the many and deep indentations of the outline of Scotland? What three canals further inland navigation? Which of them is only partly artificial? Which of them unites Loch Fyne with the Sound of Jura?

What feature of English scenery is wanting in Scotland? What and where are the two so-called *Carses*? What two lines divide Scotland into three parts, according to the nature of the surface, and the industries pursued? Show that Highlands and Lowlands are not synonymous with North and South. What and where is Glenmore? Where is the chief mountain-knot in the Grampian range? What is the name, position, and height of the highest mountain in the British Isles?

On what material basis does the pre-eminence of the central division rest? Where only outside of it do extensive manufactures exist? What towns are the principal seats of the cotton manufactures? For what manufacture is Dundee noted? What are the chief manufactures of Dunfermline? What fabrics are produced at Galashiels? etc. Name the four most populous towns in Scotland. Which are the two principal fisheries? What river is famous in connexion with one of them? What town is the chief seat of the other?

How does the democratic sentiment show itself in Scotland? Name the two principal churches besides the church established by law. What two Scotsmen have left their mark most deeply on their country? Where is the Sovereign's mountain-home? Mention five of the inland lochs most visited.

DESCRIPTIVE TABLE.

Aberdeen′ (mouth of the Dee), a seaport, the seat of a flourishing university, and the capital of the county of the same name, with extensive trade and manufactures. It is chiefly built of gray granite, and comprehends Old and New Aberdeen,—the former situated on the Don, the latter on the Dee. In Old Aberdeen there are the remains of a cathedral. Pop. 105,003.—57° 9′ N. lat., 2° 6′ W. long.

Aberdeen′shire, an extensive and important county occupying the N.E. corner of Scotland, being the most easterly point of a large triangle which juts far into the North Sea. Its N. and E. shores are washed by the ocean; the counties of Kincardine, Forfar, and Perth form its S. boundary; and Inverness and Banff border it on the W. Area 1955 square miles; pop. 267,990. The county was anciently divided into the districts of *Mar, Strathbogie, Garioch, Formartine*, and *Buchan;* but the modern division is the districts of *Braemar, Deeside, Aberdeen, Alford, Huntly, Turriff, Garioch, Ellon, Deer*, and *New Machar*. About one-third of the area of Aberdeenshire is mountainous. The S.W. and S. embrace a portion of the Grampian range. The peaks having the greatest altitude are *Ben Macdhui*, 4296 feet; *Braeriach*, 4248 feet; *Cairntoul*, 4241 feet; *Beinn-a-bhuird*, 3924 feet; *Lochnagar*, 3786 feet; *Cairn-na-Glasha*, 3484 feet. Extensive forests of fir, larch, and birch trees occupy the ascent of nearly all the mountains. The principal rivers are the *Dee, Don, Ythan*, and *Deveron*, in all of which salmon abound. In Aberdeenshire, all the branches of agriculture are prosecuted with spirit. Cattle and sheep breeding receives special attention. The cod, haddock, and herring fisheries along the coast are very productive. The manufactures include cotton, linen, sail-cloth, and woollen goods. Aberdeenshire is famous for its granite, the quarrying and preparation of which are carried on to a vast extent.

Aberneth′y, a town in Perthshire, near the mouth of the Earn, said to have been the capital of the Pictish kingdom. It has a round tower, supposed to have been part of its ancient monastery. Pop. 906.

Achray′, Loch, a small but picturesque lake in Perthshire, 6 miles W. of Callander.

Ail′sa, a rocky islet in the Firth of Clyde, off the coast of Ayr, 2 miles in circumference, and 1,114 feet high.—55, 15 N. 5, 7 W.

Air′drie (the smooth height), a parliamentary burgh and town in Lanarkshire, in the neighbourhood of great coal and iron works. Pop. of parliamentary burgh, 13,363; of town and suburbs, 16,335.

Al′loa, a seaport, the principal town in Clackmannanshire, on the Forth. Pop. 10,601.

An′nan, a seaport in Dumfriesshire, at the mouth of the Annan. Pop. 4523.—54, 59 N. 3, 14 W.

An′nan, a river which rises on the borders of Peeblesshire, and flows through Dumfriesshire into the Solway Firth.

An′struther, locally **An′ster**, **Easter** and **Wester**, two small towns on the S.E. coast of Fife. Dr Thomas Chalmers was born in Easter Anstruther, 1780. Combined pop. 1943.

Arbroath′ (a corruption of *Aberbrothock*, the mouth of the Brothock), a considerable seaport in Forfarshire, with the ruins of an ancient abbey. Pop. 21,785.—56, 34 N. 2, 32 W.

Ardnamurchan, Point of, *ard-na-mur'han* (the promontory or height of the great seas), a cape in Argyll, the most westerly point of the mainland of Scotland.—56, 44 N. 6, 13 W.

Ardros'san (high point), a seaport in Ayrshire, with an excellent harbour; it is much resorted to for sea-bathing. Pop. 4036.

Argyll'shire (the land of the Gael or strangers) is the second largest county in Scotland, and comprises the districts of *Argyll, Lorn, Cowal, Knapdale*, and *Cantire*, with several of the western islands, of which the chief are *Mull, Islay*, and *Jura*. On the N. the county is bounded by Inverness; E. by Perth, Dumbarton, and the Firth of Clyde; and S. and W. by the Irish Channel and the Atlantic. Area 3213 sq. m.; pop. 76,468. The W. side is greatly indented by arms of the sea, which penetrate far inland, the most important of these being *Loch Sunart, Loch Linnhe* (the extremities of which are *Loch Eil* and *Loch Leven*), *Loch Etive, Loch Fyne, Loch Tarbert*, and *Loch Long*, which separates the S.W. part of Dumbarton from Argyll. The surface of the county is exceedingly mountainous, especially in the N. and E. portions. Among the most elevated summits are *Ben Cruachan* (3689 feet), between Loch Etive and Loch Awe, and *Ben More* (3185 feet) in the Isle of Mull. There are several inland lakes, the largest of which is *Loch Awe*, 23 miles in length, and surrounded by wild and picturesque scenery. The chief rivers are the *Orchy* and the *Awe*. The soil of Argyllshire is not generally suited for tillage; hence the attention of the farmers is principally directed to cattle and sheep rearing. The minerals turned to economic purposes are numerous, such as lead, coal, slate, marble, limestone, and granite. The manufactures are unimportant, except that of whisky, of which large quantities are made at *Campbeltown*. The fisheries off the coast and around the islands are very valuable. The herrings of *Loch Fyne* are held in high repute.

Ar'ran (the lofty island), an island of Buteshire, in the Firth of Clyde, distinguished by its mountainous aspect and the remarkable formation of its rocks. Goat-Fell, the most elevated peak, is 2874 feet high. Pop. 4730.—55, 35 N. 5, 18 W.

A'von, the name of a romantic lake and river in Banffshire.

Awe, Loch, a beautiful lake in Argyll, about 25 miles long and from 1 to 2 broad.

Ayr, a seaport, the county town of Ayrshire, situated at the mouth of the river Ayr. In a clay-built cottage, 2 miles south from Ayr, Robert Burns was born in 1759. Pop. 20,987.—55, 27 N. 4, 39 W.

Ayr'shire, a large county on the S.W. coast, bounded on the landward sides by Renfrew, Lanark, Dumfries, Kirkcudbright, and Wigtown; and on the W. by the Firth of Clyde and the Irish Channel. Area 1128 sq. m.; pop. 217,519. Anciently the county was divided into the districts of *Carrick* (S. of the Doon, wild and hilly), *Kyle* (between the Doon and the Irvine, a rich level tract), and *Cunningham* (comprising the fertile country N. of the Irvine). The most elevated points in the county are, *Black Craig*, 2298 feet, to the E. of Glen Afton, in Kyle; *Knipe Hill*, 1885 feet, to the W. of Glen Afton; *Shalloch*, 2520 feet, in Carrick. Ayrshire is watered by a number of streams which rise near the inland boundary and flow through the county into the sea. The *Irvine* has a course of about 20 miles; the *Ayr*, with its tributary the *Lugar*, 35 miles; the *Doon* takes its rise from several small lochs in the S.E., and passes through Loch Doon; the *Girvan* and the *Stinchar* rise in the same district as the Doon, and drain the S. parts of the county. The mineral riches of the county are very considerable, coal, ironstone, and limestone being specially abundant. The whetstone known as the Water-of-Ayr stone is found at *Dalmore*, on the banks of the Ayr. The manufactures are important, and the district possesses great advantages for their development. Fuel and building materials are plentiful, and channels of communication are open in all directions.

Balmor'al (the majestic dwelling), the Highland home of Queen Victoria; it is situated in the parish of Crathie and Braemar, Aberdeenshire.

Banff, a seaport, and the county town of Banffshire, at the mouth of the Deveron. Pop., including Macduff, 7871.

Banff'shire, a maritime county, bounded on the N. by the Moray Firth; on the E. and S. by Aberdeenshire; and on the W. by Elginshire. Area 640 sq. m.; pop. 62,736. The N. portion, although agreeably diversified

with hill and valley, is comparatively level, and very fertile; but the S. parts are very mountainous, and only adapted for pasturage. *Cairngorm*, which is mostly in this county, is 4084 feet high; *Ben Aven* is 3843 feet; *Ben Rinnes*, 2755 feet; and *Coryhabbie*, 2563 feet. On the summits of several of the mountains are beds of moss, containing the remains of trees, plants, and vegetables. The rivers of Banffshire embrace the *Spey*, *Avon*, and *Deveron*. The salmon fishings in the Spey and Deveron are very valuable. In the herring-fishery off the coast above 1000 boats are engaged. The manufs. of the county are chiefly linen and yarn, tanning, and the distilling of whisky. The breeding of live stock is the principal branch of rural industry.

Ban′nockburn, a town in Stirlingshire, with large manufactures of tartans and carpets. The field of Bannockburn is memorable in Scottish history for the victory obtained by Robert Bruce over Edward II., June 24, 1314. Pop. 2549.

Bass, an almost inaccessible islet at the mouth of the Firth of Forth, rising 300 feet above the sea; it was formerly employed as a state-prison.—56, 5 N. 2, 38 W.

Bath′gate, a town in the county of Linlithgow. Pop. 4887.

Bat′tock, Mount, a mountain on the confines of the shires of Aberdeen, Kincardine, and Forfar, 2558 feet high.

Beauly, *bew′le*, a pretty village in Inverness-shire, on the firth of the same name. Pop. 915.

Bell Rock, a reef of rocks in the North Sea, about 12 miles S.E. from Arbroath, completely covered at high water. A lighthouse, 115 feet high, was erected upon it in 1811. Pop. 3.—56, 26 N. 2, 23 W.

Ben At′tow (rush mountain), a mountain in Inverness-shire, 3383 feet high.

Ben A′ven (river mountain), a mountain of the Grampian range, between the shires of Aberdeen and Banff, rising to the height of 3843 feet.

Benbec′ula, an island of the Hebrides, lying betwixt North and South Uist. Pop. 1661.

Ben Cru′achan (cone-shaped mountain), a mountain in Argyllshire, at the head of Loch Awe, 3689 feet high.

Ben De′arg (red mountain), a mountain in Ross-shire, near Loch Broom, 3551 feet high; and one in Perthshire, 3304 feet high.

Ben Law′ers (echoing mountain), a mountain in Perthshire, rising from the banks of Loch Tay to the height of 3984 feet above the sea.

Ben Le′di (mount of God), a mountain north-west of Callander, in Perthshire, with a small lake on its top, 2875 feet high.

Ben Lo′mond (bare or naked mountain), a mountain in Stirlingshire, rising from the east side of Loch Lomond to the height of 3192 feet.

Ben Macdhui, *mak-doo′e* (black boar mountain), a mountain in the W. extremity of Aberdeenshire, 4296 feet above the sea.

Ben More (great mountain), a conical mountain, towering from the banks of Loch Dochart, Perthshire, to the height of 3843 feet above the sea.

Ben More, a mountain in the island of Mull, 3185 feet high.

Ben Ne′vis (cloud-capped mountain), a mountain in Inverness-shire, near Fort William, the loftiest in Great Britain, being 4406 feet above the sea. A Meteorological Observatory has been established on the top.

Ben Venue, *ven-u′* (little mountain, as compared with Ben Ledi, which is near it), a picturesque mountain on the south side of Loch Katrine, 2393 feet high.

Ben Voir′lich (mountain of the great loch), a mountain in Perthshire, rising from the south bank of Loch Earn to the height of 3224 feet.

Ben Vor′lich (mountain of great flat stones), a mountain in Dumbartonshire, N.W. end of Loch Lomond, with two summits, the altitudes of which are respectively 3055 feet and 3092 feet.

Ben Wy′vis (mountain of terror), a mountain in Ross-shire, 3429 feet above the sea.

Ber′vie, or Inverber′vie, a small burgh in Kincardineshire. Pop. 1095.

Ber′wick. *See* ENGLAND, p. 40.

Berwickshire, *ber′rik-shir*, or the *Merse*, a county in the S.E. of Scotland, for many centuries the principal scene of strife between the Scotch and English. It is bounded on the N. by Haddington; S. by Roxburgh and the river Tweed, which separates it from England; and W. by Roxburgh and Edinburgh. Area 460 sq. m.; pop. 35,392. It comprises the ancient districts of *Lammermoor* in the N., *Lauderdale* in

the W., and the *Merse* or *March* in the S. The Lammermoors are bare and slaty, but the other two districts, especially the Merse, are level and highly fertile. The principal rivers are the *Tweed, Leader, Eye, Whitadder*, and *Blackadder*. The county is purely agricultural.

Blairgow'rie, a town in Perthshire, finely situated on the Ericht. Pop. 4537.

Borrowstounness', or **Bo'ness'**, a seaport in Linlithgowshire, on the Forth. Pop. 5284.

Braeri'ach, a precipitous mountain in the W. extremity of Aberdeenshire, 4248 feet high.

Brech'in, a royal and parliamentary burgh in the county of Forfar. Pop. of royal burgh 5295; of parliamentary burgh 9031.

Bridge of Allan, a town beautifully situated on the Allan, 3 miles N.W. of Stirling, much resorted to for its mineral waters. Pop. 3005.

Brod'ick, a village on the east coast of the island of Arran, situated at the head of Brodick Bay.—55, 36 N. 5, 7 W.

Broom, Loch (the lake of showers), an extensive arm of the sea in Ross-shire, having some excellent harbours.

Broughty Ferry, *braw'te fer're*, a town in Forfarshire, on the Firth of Tay. Pop. 7923.

Buchanness', a promontory in Aberdeenshire, the easternmost point in Scotland, near the remarkable perforated rocks called the *Bullers of Buchan*.—57, 28 N. 1, 46 W.

Burgh Head, a cape in Morayshire, with remains of ancient fortifications. —57, 43 N. 3, 28 W.

Burntisland, *burnt-i'land*, a seaport in Fifeshire, opposite Granton, now the principal ferry across the Firth of Forth.—Pop. 4271.

Bur'row Head, a cape on the south coast of Wigtownshire.—54, 41 N. 4, 20 W.

Bute, the principal island, though not the largest, in Buteshire. It is distinguished for picturesque beauty and mild climate. Pop. 10,998.—55, 51 N. 5, 4 W.

Bute'shire, a county comprising the islands of Bute, Arran, Inchmarnoch, and the Cumbraes, in the Firth of Clyde. Pop. 17,657.

Cairngorm' (blue mountain), a mountain on the confines of the counties of Banff and Inverness, famous for its rock-crystals; it is 4084 feet high.

Cairntoul' (hill of holes or caverns), a mountain on the confines of Aberdeen and Inverness shires, 4241 feet high.

Caith'ness (the promontory of the Catti, who inhabited the extremity of N. Britain), the most northerly county of the mainland of Scotland, bounded on the N. by the Atlantic Ocean; E. by the North Sea; and S. and W. by Sutherland. Area 685 sq. m.; pop. 38,865. The coast is rocky, and remarkable for the number of its bays and promontories. In the W. and S.W. the surface is mountainous. *Mount Morven* rises to a height of 2313 feet, *Scarabhein* 2054 feet, and *Maiden Pap* 1587 feet above the sea. The county is studded with a number of small lakes, from which several streams flow to the sea. Among these are the *Thurso, Wick, Dunbeath, Berriedale*, etc. The herring fishery off the coast forms the principal branch of industry. The early inhabitants of Caithness are supposed to have been Celts, who were driven out by the Danes and Norwegians, whose kings, in the Middle Ages, held dominion over this part of Scotland.

Cal'lander, a village in Perthshire, 16 miles N.W. of Stirling, beautifully situated on the Teith, and surrounded by romantic scenery. Pop. 1271.

Camp'beltown, a seaport in Argyllshire, near the S. extremity of Cantire. Pop. 7693.

Cantire' (the head of the land), a peninsula forming the southernmost district of Argyll.

Cantire', Mull of, a promontory at the S. extremity of Cantire; it is 10 miles distant from Fairhead, on the coast of Antrim, in Ireland.

Car'ron, a village in Stirlingshire, on the Carron, famous for its ironworks. Pop., including Carronshore, 1864.

Carstairs', a village in Lanarkshire. Pop. 528. Near it is Carstairs Junction, on the Caledonian Railway. Pop. 888.

Castle - Douglas, *kas'l-dug'las*, a town in the stewartry of Kirkcudbright, near the Dee. Pop. 2565.

Cat'rine, a thriving village in Ayrshire, on the Ayr. Pop. 2638.

Clackman'nan, the county town of Clackmannanshire. Pop. 1503.

Clackman'nanshire is the smallest county of Scotland. On the N.E. and W. it is bounded by Perth and Fife; the Forth separates it from Stirling on the S. Area 47 sq. m.; pop. 25,680. The

land adjacent to the Forth is fertile and well cultivated; but towards the N. the surface rises gradually to the *Ochils*, which traverse the county. The *North* and the *South Devon* are the principal streams. The mineral products of Clackmannanshire embrace coal, iron, sandstone, and greenstone. Coal is worked along the banks of the Forth, and iron along the Devon. The principal manufacture carried on in the county is of woollen goods in shawls, tartans, tweeds, and blankets.

Clyde, a large river which rises in Clydeslaw, a hill in the parish of Crawford, Lanarkshire, passes through Glasgow, and falls into the Firth of Clyde.

Coat'bridge, a town of Lanarkshire, 9½ miles E. of Glasgow, with extensive iron-works in the neighbourhood. Pop. 17,500.

Cold'stream, a town in Berwickshire, on the N. bank of the Tweed. Pop. 1616.

Coll, one of the Hebrides, belonging to Argyllshire. Pop. 643.

Cor'sill Point, a promontory on the W. coast of Wigtownshire.—55, 0 N. 5, 9. W.

Cou'par-An'gus, a town partly in Forfarshire, and partly in Perthshire, situated on the Isla. Here was an abbey founded by King Malcolm the Maiden about 1164. Pop. 2151.

Crail, a seaport in Fife, at the mouth of the Firth of Forth. Pop. 1148.

Crieff, a town in Perthshire, delightfully situated near the north bank of the Earn. Pop. 4469.

Crom'arty (from *Crombathi*, the curved or crooked bay), forming with Ross a united county of Scotland, consists of several detached portions scattered throughout Ross-shire and along its borders. It is said that this singular arrangement was caused by a former Earl of Cromarty, who wished all his property, wherever situated, to be embraced within one shire. Area, including Ross, 3129 sq. m.; pop. 78,547. The general characteristics of the county are similar to those of Ross-shire.

Crom'arty, a seaport, the county town of Cromartyshire, at the entrance of the Cromarty Firth. Hugh Miller, the celebrated geologist, was a native of this town. Pop. 1360.—57, 40 N. 4, 3 W.

Crom'arty Firth, a large, beautiful, and well-sheltered inlet of the German Ocean, between the Moray and Dornoch Firths.

Cul'len, a royal and parliamentary burgh in Banffshire, near which is Cullen House, a seat of the Earl of Seafield. Pop. of royal burgh 3682; of parliamentary burgh 2033.

Cul'ross, commonly *koo'ross*, a seaport in a detached portion of Perthshire, on the Firth of Forth. Pop. 380.

Cum'braes, two small islands in the Firth of Clyde, near the Ayrshire coast. A lighthouse is erected on the west side of Little Cumbrae. Pop. 1856.—55, 43 N. 4, 57 W.

Cum'nock, Old (the bosom of the hill), a town in Ayrshire, on the Lugar. Pop. 3345.

Cu'par-Fife, a handsome town, the capital of Fifeshire, on the Eden. Pop. 5010.

Dal'keith, a town in Edinburghshire, between the North and South Esk, about 6 miles S. from Edinburgh. Adjoining the town is Dalkeith Palace, the principal seat of the Duke of Buccleach. Pop. 6931.

Dalry', a town in Ayrshire, with coal and iron works in the vicinity. Pop. 5010.

Dee, a river in Aberdeenshire, which rises in Braeriach, and, flowing through a picturesque valley, falls into the North Sea at New Aberdeen, after a course of 90 miles.—A river which issues from Loch Dee, on the borders of Ayrshire, and, flowing through Kirkcudbrightshire, falls into the Solway Firth.

Dev'eron, a beautiful river which forms, for a considerable distance, the boundary between the counties of Aberdeen and Banff, and flows into the North Sea.

Dev'on, a river in Perthshire, rising in the Ochil Hills, and flowing to the Firth of Forth by a very circuitous course. It is remarkable for its romantic scenery.

Ding'wall (the well of gathering), the county town of Ross-shire, at the head of the Cromarty Firth. Near it is Strathpeffer, a beautiful vale, with a mineral well, which is much frequented. Pop. 1921.

Dol'lar, a town in Clackmannanshire, beautifully situated on the Devon, at the base of the Ochil Hills, with an endowed academy founded in 1819. Pop. 2014.

Don, a river rising in the W. of Aberdeenshire, and falling into the North Sea near Old Aberdeen.

Doon, a river in Ayrshire, falling into the sea near Ayr; it has been rendered classical by the poetry of Burns.

Dor'noch, a seaport, and the county town of Sutherlandshire, on the N. of the Dornoch Firth. What is now its parish church was the cathedral of the diocese of Caithness. Pop. 497.

Dor'noch Firth, an inlet of the North Sea, between the counties of Sutherland and Ross.

Douglas, *dug'las*, a district and village in the Upper Ward of Lanarkshire, which gave name to the heroic family of Douglas. Pop. 1262.

Doune, *doon*, a village in Perthshire, on the Teith, with a large cattle-market, and extensive cotton manufactures; near it are the massive ruins of a royal castle. Pop. 996.

Dumbar'ton, a parliamentary and royal burgh, and the county town of Dumbartonshire, near the confluence of the Leven with the Clyde. It has a considerable trade in shipbuilding. Its ancient castle, formerly called Alclwyd, on a precipitous rock, was long of great strength. Pop. of parliamentary burgh 13,782; of royal burgh 10,898.—55, 57 N. 4, 33 W.

Dumbar'tonshire, a county in the W. of Scotland, bounded N. by Perth; E. by Loch Lomond, Stirling, and Lanark; S. by Renfrew and the Firth of Clyde; and W. by Loch Long and Argyll. Area 241 sq. m.; pop. 75,333. About two-thirds of the county consist of mountains, woods, mosses, and moors, abounding with scenery of unrivalled beauty and grandeur. The arable land is of comparatively small extent, and lies principally between Loch Lomond and the Clyde. The highest elevation is *Ben Voirlich*, 3092 feet above the level of the sea. There are nine fresh-water lakes in the county, the largest being *Loch Lomond*, besides many streams. The *Clyde* skirts the S. border, the *Leven* is the outlet of Loch Lomond, and falls into the Clyde at the foot of Dumbarton Rock. Grazing and sheep-farming receive great attention. The principal branches of industry are the manufactures of cottons and linens, shipbuilding, bleaching, calico-printing, and dyeing. The chief minerals are coal and ironstone, which are found in the E. division. Limestone and slate are also worked.

Dumfries', a royal and parliamentary burgh, the capital of Dumfriesshire, situated on the Nith, 7 miles from the Solway Firth. Here is the burial-place of Robert Burns; and here, in 1306, Bruce killed Red John Cumyn of Badenoch. Pop. of royal burgh 15,713; of parliamentary burgh 17,092.—55, 4 N. 3, 36 W.

Dumfries'shire, an important county in the S. of Scotland, bounded on the S. by the Solway Firth, and on the other sides by the counties of Cumberland, Roxburgh, Selkirk, Peebles, Lanark, Ayr, and Kirkcudbright. Area 1062 sq. m.; pop. 76,140. Dumfriesshire comprehends the districts of *Nithsdale* in the W., *Annandale* in the middle, and *Eskdale* in the E., watered by the rivers *Nith*, *Annan*, and *Esk*. The surface has a general slope towards the Solway Firth on the S., with mountain ranges on the N. and E., sheltering it from cold. The loftiest summits are *Hartfell*, on the border of Peeblesshire, 2651 feet; *Ettrick Pen*, on the confines of Selkirkshire, 2269 feet; *Queensberry Hill*, on the boundary of Lanarkshire, 2285 feet; and *Black Larg*, close to Ayrshire, 2231 feet. There are eight lochs or lakes in the vicinity of Lochmaben, and in the N.E. corner, near the head of *Moffat Water*, is *Loch Skene* (1300 feet above the sea), whence issues the picturesque waterfall called the *Grey Mare's Tail*. The *Solway Firth*, which, for upwards of 50 miles forms the boundary between Scotland and England, is noted for the peculiarity of its tides. In these, as well as in the nature of the beach and the depth of water, it differs from every marine indentation in Great Britain. To the E. of the Nith is *Lochar Moss*, a morass about 10 miles in length, and from 2 to 3 miles in breadth. The elevated parts of the county afford excellent pasturage, and the rearing of cattle, sheep, and pigs forms an important branch of rural industry. The mineral wealth of the county is considerable. Coal is worked at *Sanquhar* and elsewhere; lead and silver are found at *Wanlockhead;* limestone for burning, and red sandstone for building, are quarried in various localities.

Dunbar', a seaport in Haddingtonshire, at the mouth of the Firth of Forth, with a large trade in herrings. Its castle, now in ruins, was in ancient times a place of great strength. Here the Scots were defeated, in 1296, by King Edward I. of England, and in 1650 by Oliver Cromwell. Pop. 3661. —56, 0 N. 2, 30 W.

Dunblane', a town in Perthshire, on the Allan, with the remains of a cathedral, and a library founded by Bishop Leighton. Near this was fought the battle of Sheriffmuir in 1715. Pop. 2186.

Dun'cansby Head, a promontory in Caithness, the N.E. extremity of Great Britain.—58, 39 N. 3, 0 W.

Dundee', a seaport in Forfarshire, on the Firth of Tay. It carries on a great trade, chiefly with the Baltic, and has extensive manufactures of jute and coarse linens. Pop. 140,239.

Dunferm'line, a royal and parliamentary burgh and town in the W. of Fife, noted for its beautiful manufacture of damasks and diapers. Here are the remains of an ancient abbey (which was the burial-place of the Scottish kings from the end of the eleventh to the middle of the fourteenth century), and of a royal palace (where King Charles I. was born in 1600). Pop. of royal burgh 19,915; of parliamentary burgh 17,084.

Dunkeld' (the stronghold of the rough, mountainous country), a town in Perthshire, on the north bank of the Tay, with an ancient cathedral, situated amidst romantic scenery. Pop. 768.

Dun'net Head, a promontory in Caithness, the most northerly point of Great Britain.—58, 40 N. 3, 21 W.

Dunoon', a town in Argyllshire, on the W. side of the Firth of Clyde, much resorted to for sea-bathing. Pop. 4692.

Duns, the principal town in Berwickshire, between the Blackadder and the Whitadder. Pop. 2437.

Dy'sart, a seaport in Fife, with a considerable trade in coals. Pop. 10,877.

Earn, a river in Perthshire, issuing from a beautiful lake of the same name, and falling into the Tay below Perth.

Ed'inburgh, the metropolis of Scotland, the seat of the law courts and of a celebrated university, is situated 1½ mile from the S. shore of the Firth of Forth, and surrounded by scenery singularly varied and grand, the Calton Hill, Arthur's Seat, and Salisbury Crags being prominent objects in the landscape. The city is divided into the Old Town and the New Town; in the former, the palace of Holyrood, and the castle on the summit of a precipitous rock, are places of great historical interest. The New Town, on the north, built according to a regular plan, is distinguished by the elegance of its buildings, streets, and squares. Pop. 236,002.—55, 57 N. 3, 10½ W.

Ed'inburghshire, or Mid-Lothian, the metropolitan county of Scotland, bounded N. by the Firth of Forth; E. by Haddington and Berwick; S.E. by Roxburgh; S. by Selkirk and Peebles; and W. by Lanark and Linlithgow. Area 367 sq. m.; pop. 389,164. This county is distinguished for the richness of its soil and the beauty and variety of its scenery. The *Moorfoot Hills,* a branch of the Lammermoors, intersect the S.E.; the *Pentland Hills,* whose highest summit is *Carnethy,* 1890 feet above the sea, run from the S.W. towards the N.E.; and near the capital is *Arthur's Seat,* an isolated hill 822 feet high. The land gradually slopes from the S. towards the borders of the Firth of Forth, and on the E. and W. extends into level and fertile plains. Streams are numerous, but small, the principal being the *Water of Leith,* the *North* and the *South Esk,* and the *Almond.* Edinburghshire is chiefly an agricultural county, and rather more than half of its area is under cultivation. The farmers hold a foremost place among agriculturists, and are proud of their reputation. The minerals are varied and valuable. Coal is extensively wrought in the neighbourhood of *Dalkeith,* and in the E. and S.E. districts generally. In the coal strata iron is found. Sandstone of a very fine quality is quarried at *Craigleith.* Limestone abounds at *Gilmerton, Burdiehouse,* and *Crichton.* The manufactures are not numerous, but are important. At *West Calder* there are extensive paraffin works. At *Penicuik* and *Polton,* on the Esk, printing and writing papers are made, both for home consumption and for exportation. *Leith,* the port of Edinburgh, has extensive shipbuilding yards, and large engineering, soap, candle, colour, and rope works. At *Musselburgh,* at the mouth of the Esk, paper-making and net-weaving are carried on. Between Musselburgh and Leith is *Portobello,* a fashionable resort for sea-bathing, with important bottle-works, brick and tile works, and a pottery. *Edinburgh,* the capital, is noted for its extensive book-producing trade.

Ed'nam, a village in Roxburghshire, N.E. of Kelso, on the Eden, the birthplace of Thomson the poet. Pop. 612 p.

Eil'don Hills, in Roxburghshire, a beautiful hill with three conical peaks, commanding a very extensive prospect.

El'gin, an ancient city, the capital of Elgin or Moray shire, on the Lossie, about five miles from its mouth. Its ancient cathedral is one of the most

magnificent ruins in Scotland. Pop. 7533.—57, 38 N. 3, 21 W.

El'ginshire, a county in the N. of Scotland, comprising the eastern portion of the ancient province of Moray, Murray, or Murreff, and hence not unfrequently called Morayshire, is bounded on the N. by the Moray Firth, and on the landward sides by Banff, Inverness, and Nairn. Area 475 sq. m.; pop. 43,788. The surface is level, and the soil rich and fertile towards the N., but mountainous in the E. and S. There are few lakes. The *Spey* in the E., the *Lossie* in the centre, and the *Findhorn* in the W., are the principal rivers. Cattle and sheep are extensively reared. The manufactures are not large, and are chiefly of woollen stuffs.

Er'icht, a lake partly in Perthshire and partly in Inverness-shire.

Esk, the name of several rivers. One rises in the N. of Dumfriesshire, and flows to the Solway Firth. In Mid-Lothian, the North Esk joins the South Esk below Dalkeith, and falls into the Firth of Forth at Musselburgh. In Forfarshire, the North Esk has its source in the Grampian Mountains, and falls into the sea 3 miles N. of Montrose. The South Esk also rises among the Grampians, and falls into the sea at Montrose.

E'tive, Loch, an inlet of the sea in Argyllshire, 20 miles long.

Fair Isle, belonging to the Shetlands, lying between that group and the Orkneys. Pop. 214.

Fal'kirk, a town in Stirlingshire, noted for its large cattle-markets, called Trysts. Pop., including suburbs, 15,599.

Falkland, *fawk'land*, a town in Fifeshire, with beautiful remains of an ancient palace of the kings of Scotland. Here the Duke of Rothesay, the eldest son of King Robert III., died in prison in 1400; and here King James V. died in 1542. Pop. 972.

Fer'ryport-on-Craig, a town on the estuary of the Tay, opposite Broughty Ferry. It is also called **Tayport**. Pop. 2630.

Fifeness', a cape at the eastern extremity of Fife, from which a dangerous ridge, called the Carr Rock, projects into the sea.—56, 17 N. 2, 35 W.

Fife'shire, popularly called the "Kingdom of Fife," forms almost a peninsula on the E. coast of Scotland, between the Firth of Tay on the N. and the Firth of Forth on the S., having E. the North Sea, and W. the counties of Perth, Kinross, and Clackmannan. Area 492 sq. m.; pop. 171,931. The county everywhere presents a pleasant variety of hill and dale, the most prominent features being the *Lomond Hills* in the centre, and *Largo Law* and *Kellie Law* in the E. *E. Lomond* is 1471 feet, and *W. Lomond* 1713 feet, above the level of the sea. The principal valley, called the *How of Fife*, lies N. of the Lomonds, and is an especially productive tract. The *Eden* and *Leven* are the chief rivers. Throughout the county are numerous ruins of castles, towers, abbeys, religious houses, and other interesting remains of former times. Many of the events connected with the Scottish Reformation occurred here, especially at St Andrews, which was for centuries the metropolitan seat of the Primate of all Scotland. The Scottish sovereigns seem to have always entertained a peculiar attachment towards Fife, as is proved by their having palaces at Dunfermline, Falkland, Kinghorn, Crail, and St Andrews. The mining and manufacturing industry of Fifeshire is considerable. In the S. division, which is a portion of the great coal-fields of the Forth, the annual output of the mines is exceedingly large. Iron and limestone are also largely worked. Linen in all its branches is the great staple manufacture of the county. Shipbuilding is carried on in various ports.

Find'horn, a small seaport in Elginshire, at the mouth of the Findhorn. Pop. 605.

Foch'abers, a thriving town in Elginshire, near the mouth of the Spey; in the vicinity is Gordon Castle, the stately seat of the Duke of Richmond and Gordon. Pop. 1189.

For'far (the warrior's town), the county town of Forfarshire, situated in the valley of Strathmore. Of old the Scottish kings had a palace here. Pop. 12,817.

For'farshire, or **Angus**, a county N. of the Tay, comprising the districts of *Glenisla*, *Glenprosen*, *Glenesk*, and part of the great valley of *Strathmore*. Aberdeen and Kincardine bound it on the N.; the North Sea on the E.; the Firth of Tay on the S.; and Perthshire on the W. Area 875 sq. m.; pop. 266,360. The surface of the county is naturally divided into four parallel belts, running from N.E. to S.W.; these are the Grampian district, comprising the greater part of the N.W., and

known as the *Braes of Angus; Strathmore,* which extends across the centre; the *Sidlaw Hills,* which terminate in the promontory on the coast called *Redhead;* and the maritime district, lying between the Sidlaws and the sea. The highest mountain peaks are *Glashmeal,* 3502 feet; *Dog Hill,* 2369 feet; and *Catlaw,* 2196 feet. The chief rivers are the *North* and the *South Esk* and the *Isla.* About two-fifths of the area of the county are under cultivation. Cattle of a fine breed are reared and exported. There are no mines, but limestone, sandstone, and whinstone are quarried to a considerable extent. The manufactures are those of linen and jute, carried on extensively at *Dundee* and the other large towns.

For'res, a town in Elginshire, near which is a remarkable sculptured obelisk. Pop. 4030.

Fort George, Fort Augustus, Fort William, three fortresses in Inverness-shire, erected to overawe the Highland clans. The two last have been dismantled.

Forth, anciently *Bodotria,* one of the principal rivers of Scotland, rises in Ben Lomond, and expands into a large firth before uniting with the North Sea.

Fortrose', a seaport in Ross-shire, on the N. coast of the Moray Firth, opposite Fort George. Here are the ruins of a fine cathedral built in the 14th century. Pop. 869.

Fra'serburgh, a seaport in Aberdeenshire, with a large trade in the herring-fishery. Pop. 6583.

Fy'ers or **Foy'ers,** a river in Inverness-shire, which discharges itself into Loch Ness, remarkable for its stupendous *falls,* the upper of which is 70 and the lower 207 feet in height.

Fyne, Loch, an arm of the sea in Argyllshire, about 40 miles long and from 2 to 4 broad.

Galashiels', a town in Selkirkshire, on the Gala, near its confluence with the Tweed, noted for its manufacture of woollens. Pop. 15,330.

Gal'loway, a large district in the south-west of Scotland, including the counties of Wigtown and Kirkcudbright. It is famed for its breed of cattle.

Gal'loway, Mull of, a bold headland on the S. extremity of Wigtownshire, the most southerly point in Scotland.—54, 38 N. 4, 51 W.

Gir'van, a seaport in Ayrshire, with a considerable trade. Pop. 4505.

Glasgow, *glas'go,* the principal manufacturing and commercial city of Scotland, in Lanarkshire, on the Clyde. All the branches of the cotton manufacture are carried on upon the most extensive scale. It has also a great foreign and colonial trade, large shipbuilding yards, a flourishing university, a fine cathedral, and many other handsome edifices. Pop. of parliamentary burgh 674,095.

Gol'spie, a small seaport in Sutherlandshire. In the vicinity is Dunrobin Castle, the stately seat of the Duke of Sutherland. Pop. 956.

Gou'rock, a thriving village in Renfrewshire, 3 miles below Greenock, a great resort for sea-bathing. Pop. 3336.

Gram'pian Mountains (huge or dark mountains), a chain stretching across the island, from Argyllshire to Aberdeenshire.

Grange'mouth, a seaport in Stirlingshire, near the junction of the Forth and Clyde Canal with the Firth of Forth. Pop. 4561.

Gran'ton, a village on the Firth of Forth, 3 miles from Edinburgh, with a fine pier and harbour. Pop. 927.

Green'law, the county town of Berwickshire. Pop. 744.

Green'ock (the sunny spot), a seaport in Renfrewshire, with an extensive trade, at the mouth of the Clyde. Here James Watt was born in 1736. Pop. 66,701.—55, 57 N. 4, 44 W.

Gret'na-Green, a village in Dumfriesshire, near the English border, long noted for irregular marriages. Pop. 1212 p.

Had'dington, the county town of Haddingtonshire, with a large weekly market for grain. Here John Knox was born in 1505. Pop. 4043.

Had'dingtonshire, or **East Lothian,** a county in the S.E. of Scotland, accounted one of the most fertile and highly cultivated districts in the kingdom. On the N. it is bounded by the Firth of Forth; on the E. by the North Sea; on the S. by the Lammermoor Hills, which separate it from Berwickshire; and on the W. by the county of Edinburgh. Area 270 sq. m.; pop. 38,502. From the Lammermoors in the S. the surface, diversified by gentle elevations, gradually slopes towards the Firth of Forth. In the N. is a cone-shaped hill called *North Berwick Law,* 612 feet, and off the coast is the celebrated *Bass Rock,* formerly a state prison, 300 feet above the sea. Had-

dingtonshire is well watered by a number of small streams, the chief of which is the *Tyne*. It possesses few manufactures, but there are the usual local industries, none of which, however, are very extensive. In the W., especially around *Tranent*, there are extensive collieries. Limestone is abundant. The fishery along the coast is valuable, and employs a good many men.

Ham'ilton, a manufacturing town in Lanarkshire, near the confluence of the Avon and the Clyde. The Duke of Hamilton's magnificent palace is close beside it. Pop. 18,517.

Haw'ick (the town on the haugh or low meadow), a manufacturing town in Roxburghshire, at the junction of the Teviot and Slitrig. Pop. 16,184.

Heb'rides, or Western Isles (anciently *Ebūdes*), a range of islands, about two hundred in number, of which about seventy are inhabited, scattered along the western coast of Scotland.

Hel'ensburgh, a modern town in Dumbartonshire, on the Firth of Clyde, opposite Greenock, much frequented for sea-bathing. Pop. 7693.

Hoy, one of the Orkney Islands. The *Dwarfie Stone* in this island is a remarkable relic of antiquity. Pop. 1380.

Hunt'ly, a town in Aberdeenshire, pleasantly situated on the Deveron. Pop. 3519.

Inchcolm, *inch-kom'*, a small island, with the ruins of a monastery, and an ancient oratory, in the Firth of Forth, opposite Aberdour in Fife. Pop. 7.

Inchkeith', a small island in the Firth of Forth, on which is a lighthouse and fort, opposite Leith. Pop. 75.

Innel'lan, a village in Argyllshire, on the W. shore of the Firth of Clyde, 4 miles W. of Dunoon. Pop. 895.

Invera'ray, the county town of Argyllshire, finely situated near the head of Loch Fyne. In the vicinity is Inveraray Castle, the principal seat of the Duke of Argyll. Pop. 864.—56, 15 N. 5, 4 W.

Inverkeith'ing, a seaport in Fife, on a fine bay in the Firth of Forth. Pop. 1646.

Inverlei'then, or Innerlei'then, a village in Peeblesshire, on the N. bank of the Tweed, formerly much resorted to for its mineral waters; it is believed to be the St Ronan's Well of Sir Walter Scott. Pop. 2313.

Inverness', the county town of Inverness-shire, and the capital of the Highlands, delightfully situated near the confluence of the Ness with the Moray Firth. Five miles N.E. is Culloden Moor, where the battle of Culloden was fought in 1746. Pop. 17,365.—57, 29 N. 4, 11 W.

Inverness'shire, an important Highland pastoral county in the N.W. of Scotland, encompassed on the landward sides by the counties of Ross, Nairn, Elgin, Banff, Aberdeen, Perth, and Argyll, and embracing the islands of *Sky*, *Eig*, *Barra*, *South Uist*, *Benbecula*, *North Uist*, and the part of Long Island called *Harris*, besides a number of islets lying off the coast. It is the largest county in Scotland, the area being 4088 sq. m., and the pop. 90,454. Its W. coast is deeply indented by creeks, bays, and arms of the sea. The principal of these are Lochs *Moidart*, *Aylort*, *Nevis*, and *Hourn*. The surface of the county is very rugged, consisting of vast ranges of lofty mountains, separated by deep straths or valleys, through which flow some of the chief rivers, such as the *Spey*, *Ness*, *Beauly*, *Lochy*, *Garry*, and *Glass*, all abounding in salmon. The mainland of Inverness-shire is divided into two nearly equal parts by *Glenmore*, or the "Great Glen of Albin," which traverses its whole extent from N.E. to S.W., and has its lakes (Lochs *Ness*, *Oich*, and *Lochy*) united by the *Caledonian Canal*. In the S.W. extremity of this glen or strath is *Ben Nevis*, the highest mountain in Britain, 4406 feet above the sea. In Skye, some of the mountain peaks, such as those of the *Cuchullins*, exceed 3000 feet in height. Throughout Inverness-shire great attention is paid to the rearing of sheep and cattle. The manufactures are few.

Inveru'ry, a town in Aberdeenshire, at the confluence of the Don and the Ury. Pop. 2931.

Io'na, or Icolmkill, *i-kom-kill'* or *e-kom-kill'*, a small island of the Hebrides, S.W. of Mull, famed as a retreat of learning and religion during the dark ages. It contains the remains of a famous monastery, founded by St Columba in the year 563. Pop. 243.—56, 21 N. 6, 25 W.

Ir'vine, a seaport in Ayrshire, near the mouth of the Irvine, with a large export trade in coals. Pop. 8498.

Islay, *i'lay*, one of the Western Isles, S.W. of Jura, is about 24 miles long and 18 broad. Pop. 7559. (Bowmore', a thriving town, is its principal port. Pop. 834.)—55, 50 N. 6, 12 W.

Jed'burgh, the county town of Roxburghshire, pleasantly situated on the

Jed. Here are the remains of an ancient abbey. Pop. 3402.

John'stone, a manufacturing town in Renfrewshire, on the Black Cart, with valuable coal-mines in the neighbourhood. Pop. 9267.

Ju'ra, one of the Western Isles, separated from Islay by the Sound of Islay, and from Scarba by the Gulf of Corryvreckan. It has three conical mountains called the Paps of Jura, the highest being 2569 feet. Pop. 773. —56, 0 N. 5, 54 W.

Ka'trine, Loch, a lake in Perthshire, 8 miles long and 1 broad, surrounded by mountains, and celebrated for the picturesque scenery of the *Trossachs*. Its waters have been conducted by tunnels and pipes to Glasgow for the use of that city.

Keith, a town in Banffshire, on the Isla. Pop. 4339.

Kel'so, a town in Roxburghshire, beautifully situated at the confluence of the Tweed and the Teviot. Here are the ruins of a magnificent abbey. In the vicinity is Floors Castle, the seat of the Duke of Roxburgh. Pop. 4687.

Ken, a river in Kirkcudbrightshire, which expands into Loch Ken.

Killiecran'kie, a celebrated pass in Perthshire, near the junction of the Tummel and the Garry. Here, in 1689, the forces of King William III., under General Mackay, were defeated by the Jacobites, under the Viscount of Dundee, who was mortally wounded on the field.

Kilmar'nock, a town in Ayrshire, on a tributary of the Irvine, with considerable manufactures. Pop. 24,978.

Kilwin'ning, an ancient town in Ayrshire, with remains of a monastery. Pop. 3469.

Kincar'dine, a seaport in Perthshire, on the Forth. Pop. 1351.

Kincar'dineshire, or The Mearns, a small maritime county in the E. of Scotland, lying between the Dee and the North Esk, and having Aberdeen and Forfar as its landward boundaries. Area 383 sq. m.; pop. 34,464. The coast from the mouth of the North Esk to the royal burgh of Bervie is low and rocky; from Bervie to Stonehaven it is formed of a chain of cliffs, which rise from 150 to 300 feet out of the sea, with little or no beach; and from Stonehaven to the promontory of *Girdleness*, it continues bold, but the indentations in the rocks and bits of level shore are more frequent and extensive. The Grampian range occupies the western, central, and more northern parts of the county, the loftiest summits being *Mount Battock*, 2555 feet, on which the three counties of Kincardine, Aberdeen, and Forfar meet; *Clach-na-beinn*, 1944 feet; and *Kerloack*, 1747 feet. In the S. and E. lies the rich and fertile tract locally called the *How o' the Mearns*, which forms part of the valley of Strathmore. The chief rivers are the *Dee*, *North Esk*, and *Bervie*. On most farms cattle and sheep are bred for exportation. The manufactures are unimportant. The chief employment of the inhabitants of the villages on the coast is connected with the fisheries.

Kinghorn' (corner headland), a town in Fife, opposite Leith. Near this King Alexander III. was killed by a fall from his horse in 1286. Pop. 1790.

Kinnairds' Head, a promontory on the coast of Aberdeenshire, with a lighthouse.—57, 44 N. 2, 1 W.

Kinross' (the head of the promontory), the county town of Kinross-shire, at the W. extremity of Loch Leven. Pop. 1960.

Kinross-shire is a small but well-cultivated county surrounded by Perth and Fife. Area 78 sq. m.; pop. 6697. The middle part of the county is occupied by *Loch Leven*, from the banks of which the ground rises on all sides gently towards the Ochils on the N., but abruptly towards the Cleish Hills on the S. On an islet in Loch Leven is the celebrated castle of that name, in which Mary Queen of Scots was for some time a prisoner. The minerals and manufactures of Kinross-shire are unimportant.

Kirkcaldy, *kirk-kaw'de*, a royal and parliamentary burgh and seaport in Fife, on the Firth of Forth, with a considerable trade. Here Adam Smith was born in 1723. Pop. of royal burgh 23,288; of parliamentary burgh 13,320.

Kirkcudbright, *kirk-koo'bre* (the church or town of St Cuthbert), the chief town of the stewartry of Kirkcudbright, near the mouth of the Dee. Pop. 2571.—54, 4 N. 49, 7 W.

Kirkcudbrightshire, or the Stewartry of Kirkcudbright, a county comprising the eastern district of *Galloway;* it is bounded on the N. by Ayr; on the E. by Dumfries; on the S. by the Solway Firth; and on the W. by Wigtown. Area 897 sq. m.; pop. 42,127. About two-thirds of the county is mountainous, the most ele-

vated portions being *Meyrick Mountain* (2764 feet), *Rhinns of Kells* (*Corscrine* 2668 feet), *Cairnsmoor of Carsphairn* (2612 feet), and *Cairnsmoor of Fleet* (2331 feet). A mountain-range stretches along the whole N. boundary in the form of a vast amphitheatre, embracing nearly half the county. The principal rivers are the *Dee, Fleet, Ken, Cree,* and *Urr.* Lakes are numerous, the most considerable being *Loch Ken* and *Loch Doon.* The coast is indented by several bays, of which the chief are *Kirkcudbright Bay* and *Fleet Bay.* The pastures of Kirkcudbright are excellent, and vast numbers of sheep and cattle are reared for the English markets. In many parts great attention is given to bees, and the county is noted for its honey. The occupations of the people are mainly those connected with agriculture and grazing.

Kirkintil'loch, a town in Dumbartonshire, on the Kelvin. Pop. 8029.

Kirk'wall, the chief town of Orkney, in the island of Pomona. It contains the ancient cathedral of St Magnus. Pop. 4801.

Kirriemuir', a manufacturing town in Forfarshire. Pop., including Southmuir, 4390.

Lag'gan, Loch, a lake in Invernessshire, 8 miles long.

Lamlash', a small town at the head of the beautiful bay of Lamlash, on the east coast of the island of Arran.

Lam'mermoor, a range of hills extending from the S.E. extremity of Edinburghshire, through the shires of Haddington and Berwick, to the North Sea.

Lan'ark, a royal and parliamentary burgh, and the county town of Lanarkshire, near the celebrated falls of the Clyde. Here, in 1297, William Wallace, the Scottish patriot, began his career in arms. (A mile distant is **New Lanark,** with extensive cotton-mills.) Pop. of royal burgh 5874; of parliamentary burgh 4910.

Lan'arkshire, or Clydesdale, is the most populous as well as the greatest manufacturing county in Scotland. It is encompassed by Stirling, Linlithgow, Edinburgh, Peebles, Dumfries, Ayr, Renfrew, and Dumbarton. Area 881 sq. m.; pop. 904,412. In the southern border the *Clyde* has its source, and flows in a N.W. direction through the whole extent of the county, dividing it into two nearly equal parts. The tributary streams of the Clyde are numerous, the principal being the *Avon, North* and *South Calder, Cart, Coulter, Daer, Douglas, Kelvin, Mouse,* and *Nethan.* For judicial and municipal purposes, Lanarkshire is divided into three districts called wards. The *Upper* (or southern) *Ward* embraces about two-thirds of the county, and consists principally of mountains, hills, and moorish grounds. The most elevated parts are the *Lowther Hills* (2403 feet), and *Tinto Hill* (2335 feet). Rich seams of coal and lead abound in this ward; ironstone is also found; and extensive iron-works are in operation. The *Middle Ward* is much smaller in extent than the Upper. The surface is less hilly and more cultivated. The vale of the Clyde is exceedingly picturesque and fertile, and vast quantities of fruit are grown. Coal, ironstone, whinstone, and sandstone are abundant. On the Clyde, 2 miles below Hamilton, is *Bothwell Bridge,* the scene of a celebrated battle between the Covenanters and the Royal forces under Monmouth in 1679. The *Lower Ward,* although the smallest of the three divisions, is the most important, on account of its being the centre of vast manufacturing industries.

Langholm, *lang'um* (the long meadow), a town in Dumfriesshire, on the Esk, a few miles from the English border. Pop. 4200.

Largs, a town in Ayrshire, on the Firth of Clyde, a favourite resort for sea-bathing. Here the Danes under Haco were defeated by Alexander III. of Scotland in 1263. Pop. 3079.

Lau'der, a royal and parliamentary burgh in Berwickshire, situated on the Leader. Here, in 1482, the Scottish nobles seized and put to death the favourites of King James III. Pop. of royal burgh 1014; of parliamentary burgh 964.

Laurencekirk', a considerable village in Kincardineshire. Pop. 1454.

Leadhills', a village in Lanarkshire, occupied by lead-miners; it is the highest inhabited place in the south of Scotland, being 1300 feet above the sea. Near it is the birthplace of Allan Ramsay. Pop. 1023.

Leith, an important seaport on the Firth of Forth, about a mile and a half from Edinburgh, of which it is the port. Pop. 59,485.

Ler'wick, the chief town of Shetland, in the E. of Mainland. Pop. 4045. —60, 9 N. 1, 8 W.

Le'ven, Loch, a lake in Kinrossshire, containing four islands; on one

of these are the ruins of Loch Leven Castle, in which Queen Mary was imprisoned in 1567.

Lew'is, an island, the largest of the Hebrides, belongs to Ross-shire; its southern peninsula is named Harris, and belongs to Inverness-shire. Pop. 28,339.

Lew'is, Butt of, the most northerly point of the island of Lewis.—58, 32 N. 6, 22 W.

Linlithgow, *lin-lith'go*, a royal and parliamentary burgh, and the county town of Linlithgowshire, with the ruins of a noble palace, in which Queen Mary was born in 1542. Here the Regent Murray was assassinated by Hamilton of Bothwellhaugh in 1570. Pop. of royal burgh 3729; of parliamentary burgh 3913.

Linlith'gowshire, or West Lothian, a small county of Scotland, open to the Firth of Forth on the N., and having as its landward boundaries the counties of Edinburgh, Lanark, and Stirling. Area 120 sq. m.; pop. 43,510. The surface of the country, although exhibiting a considerable breadth of unreclaimed moss, is well cultivated, and agreeably diversified with valleys and rising grounds; but it is indifferently supplied with water, the *Avon* and *Almond* being the only streams of consequence. The mineral treasures of Linlithgowshire are abundant and valuable, especially coal, limestone, and freestone. The celebrated Boghead or Torbanehill mineral, a peculiar kind of gas-coal, is found at *Bathgate*, and yields naphtha, used for various purposes in the arts; paraffin oil for lamps and for lubricating machinery; and wax or solid paraffin for making candles. Bathgate is a great seat of the paraffin manufacture. The other manufactures of the county are not important.

Linnhe, *lin'ne*, **Loch**, a large arm of the sea in Argyllshire. It extends from the Sound of Mull to Coranferry, where it assumes the name of Loch Eil.

Lochnagar', a mountain in Aberdeenshire, 3800 feet high, celebrated in the poetry of Lord Byron.

Lochy, Loch, a lake in Inverness-shire, 14 miles long, in the line of the Caledonian Canal.

Lock'erbie, a town in Dumfries-shire. Pop. 2029.

Lo'mond, Loch, a beautiful lake, the largest in Britain, between Dumbartonshire and Stirlingshire, 24 miles long, and, near its southern extremity, 7 miles broad. It is studded with more than thirty islands, and its scenery is highly picturesque.

Long, Loch, an arm of the sea, separating Argyll from Dumbartonshire.

Lo'thian, a fertile district on the S. of the Forth, divided into three counties,—Linlithgow or West Lothian, Edinburgh or Mid Lothian, and Haddington or East Lothian.

Low'thers, a lofty ridge of hills between Lanarkshire and Dumfriesshire, 2377 feet high.

Luce Bay, a large bay in the S. of Wigtownshire, deriving its name from the Luce, a river which falls into it.

Maree', a lake in Ross-shire, 12 miles long and 2 broad, beautifully studded with islands.

Mauch'line, a town in Ayrshire, near the Ayr, celebrated by Burns, who long resided in its neighbourhood, and noted for its manufacture of tartan woodwork. Pop. 1616.

May, Isle of, a small island at the entrance of the Firth of Forth, with a lighthouse. Pop. 22.—56, 11 N. 2, 33 W.

May'bole, a town in Ayrshire, 9 miles S. of Ayr, with manufactures of boots and shoes. Pop. 4474.

Mel'rose, a town in Roxburghshire, on the Tweed. Its abbey, founded by David I. in 1136, was the most beautiful in Scotland. In its vicinity is Abbotsford, the seat of Sir Walter Scott, whose library and study are preserved nearly as left at his death. Pop. 1550.

Minch, the sound or channel separating the island of Lewis from the mainland and the Isle of Skye.

Mof'fat, a pleasant town in Dumfriesshire, on the Annan, noted for its mineral waters. Pop. 2161.

Montrose', a royal and parliamentary burgh and seaport in Forfarshire, at the mouth of the South Esk. Pop. of royal burgh 14,177; of parliamentary burgh 14,973.

Mor'ay. *See* **Elgin.**

Mor'ay Firth, a large inlet of the German Ocean, stretching between the counties of Ross and Cromarty on the N., and those of Elgin, Nairn, and Inverness on the S.

Mull, Island of, one of the Hebrides, 25 miles in length, separated from the mainland by the Sound of Mull. Pop. 5229.

Mus'selburgh (the town with the mussel bed), a town in Edinburgh-

shire, about 6 miles S.E. of the capital, united to Fisherrow by bridges over the Esk. Here the Romans had a station; and near this, at Pinkiecleuch, the Scots were defeated by the English in 1547. Pop. 7880.

Nairn, a seaport, a royal and parliamentary burgh, and the county town of Nairnshire, on the Moray Firth. Pop. of royal burgh 4665; of parliamentary burgh 4161.

Nairn'shire, a small county forming a part of the ancient province of Moray. It is bounded on the N. by the Moray Firth; on the E. by Elgin; and on the S. and W. by Inverness. Area, including detached portions in the counties of Inverness, Elgin, and Ross, 178 sq.m.; pop. 10,455. Towards the sea the country is level, and the soil is fertile and well cultivated; but towards the S. the surface is mountainous. The most elevated summits are *Ben Bui* and *Craig Our*. The *Findhorn* and the *Nairn* are the principal rivers, both of which abound with salmon and trout. There are no mines. Agriculture and the breeding of horses, cattle, and sheep have of late years been much improved.

Ness, Loch, a lake in Inverness-shire, 22 miles long, through which the Caledonian Canal passes.

New'burgh, a seaport in Fife, on the Firth of Tay. Pop. 2374.

New'ton-Stew'art, a modern town in Wigtownshire, on the Cree, with a thriving trade. Pop. 3070.

Nith, a river which rises in Ayrshire, and, entering Dumfriesshire, runs S.E. and falls into the Solway Firth below Dumfries.

North Berwick, *ber'rik*, a royal and parliamentary burgh in the county of Haddington, with the ruins of a nunnery, at the foot of the conical hill called North Berwick Law. Pop. of royal burgh 1177; of parliamentary burgh 1698.

O'ban, a seaport in Argyllshire, on the W. coast, a central point for steamboats passing to and from the Caledonian Canal and the Western Isles. Pop. 4046.—56, 27 N. 5, 27 W.

Och'il Hills, a range of hills stretching from the vicinity of Dunblane in Perthshire, in an easterly direction, into Fife. Bencleugh, the loftiest of the range, is 2363 feet high.

Orkney and Shetland, a county composed of two groups of islands lying to the N.E. of Caithness. The Orkneys are separated from Caithness by the Pentland Firth, which is 5½ m. broad at its narrowest part. Of the 67 islands, 29 are inhabited — the principal being *Pomona, South Ronaldshay, Hoy, Burray, Sanday, Westray, Stronsay,* and *North Ronaldshay*. The total area is 927 sq. m.; pop. 32,044. All the islands are high and precipitous on their W. sides, and slope gently towards the E. Being destitute of trees and shrubs, except a few that are grown in gardens, they present a somewhat bleak and barren aspect. The valleys, however, are fertile and well cultivated, and much attention is given to grazing. The whale, cod, and herring fisheries afford employment to large numbers of the population. The Orkneys are rich in memorials of past centuries, among the most interesting of which is the venerable cathedral of St Magnus, at *Kirkwall*, the chief town. It is said to have been founded in 1138. The Shetland Islands are above 100 in number, of which only about 30 are inhabited; the chief of these are *Mainland, Unst, Yell, Whalsay, Fetlar, Papa Stour,* and *Foula*, supposed to be the "Ultima Thule" of Tacitus. The aggregate area is 325 sq. m.; pop. 29,705. The cliff scenery of these islands is magnificent and varied. Owing to the peaty nature of the soil, not much of it is under tillage. Great attention, however, is devoted to the rearing of live stock, Shetland being famous for its peculiarly diminutive breed of cattle and ponies. The female portion of the population are adepts at the knitting of fine hosiery and shawls, which find a ready market in the southern parts of the kingdom. Between the Orkney and Shetland groups is *Fair Isle*, on which was wrecked the flag-ship of the admiral of the Spanish Armada.

Pais'ley, a thriving manufacturing town in Renfrewshire, on the White Cart. Here are the ruins of an abbey founded about 1163 by Walter Fitz-Alan, the progenitor of the royal house of Stuart. Pop. 55,638.

Pee'bles, the county town of Peeblesshire, on the Tweed. Pop. 5808.

Pee'blesshire, also called **Tweeddale**, a county in the S. of Scotland; it is a sparsely peopled pastoral district, surrounded by the counties of Edinburgh, Selkirk, Dumfries, and Lanark. Area 354 sq. m.; pop. 13,822. The surface consists to a large extent of mountain, moor, and bog, fitted only

for pasturage; but the valleys are fertile and well wooded. The *Broadlaw Hill* has an elevation of 2723 feet. The uplands are covered with innumerable flocks of sheep, which produce excellent wool. The chief river is the *Tweed*, which rises in the S.W. extremity of the county, 1500 feet above the sea. The county is also watered by numerous small streams, such as the *Lyne*, *Leithen*, *Talla*, *Megget*, *Manor*, and *Eddleston*. The staple industry is sheep-farming.

Pent'land Firth, a strait separating the mainland from the Orkney Isles, the navigation of which is at all times hazardous from its rapid currents and dangerous whirlpools.—58, 42 N. 3, 10 W.

Pent'land Hills, a range of hills in Edinburghshire, of which *Scald Law* is 1898 feet high.

Perth, an ancient city, royal and parliamentary burgh, and the capital of Perthshire, delightfully situated on the Tay, and surrounded by beautiful scenery. Here King James I. was murdered in 1437. Pop. of royal burgh 27,207; of parliamentary burgh 28,949. —56, 24 N. 3, 25 W.

Perth'shire, a large and important county surrounded by the counties of Inverness, Aberdeen, Forfar, Fife, Kinross, Clackmannan, Stirling, Dumbarton, and Argyll. It comprises the districts of *Menteith*, *Strathearn*, *Gowrie*, *Stormont*, *Strathardle*, *Glenshee*, *Athole*, *Breadalbane*, *Rannoch*, and *Balquhidder*. It has an area of 2527 sq. m., with a pop. numbering 129,007. The aspect of the county is exceedingly diversified. The highlands occupy about two-thirds of the surface; and the lowlands, situated at the E. and S. extremities, consist of extensive tracts of rich and fertile country, especially the district known as the *Carse of Gowrie*. The N. and W. parts of the county are very mountainous. Among the most elevated peaks are to be found *Ben Lawers*, 3984 feet; *Ben More*, 3843 feet; *Stobinain*, 3827 feet; *Ben Lui*, 3708 feet; *Benglo*, or *Ben-y-Gloe*, 3671 feet; *Schiehallion*, 3547 feet. Perthshire possesses several large and picturesque lakes, of which the largest are Lochs *Tay*, *Rannoch*, *Ericht*, *Earn*, *Katrine*, and *Vennacher*. The principal rivers are the *Tay* and *Forth*, with their tributaries the *Lyon*, *Garry*, *Braan*, *Isla*, *Tummel*, *Earn*, *Teith*, *Allan*, and *Devon*. Perthshire is almost entirely an agricultural county. Sheep and cattle are extensively reared. The manufactures are unimportant.

Peterhead', a seaport in Aberdeenshire, with a large trade, particularly in the fisheries. Pop. 10,953.—57, 30 N. 1, 47 W.

Pitcaith'ly, a village in Strathearn, Perthshire, noted for its mineral waters.

Pomo'na or **Mainland**, the largest of the Orkney Isles, much intersected by arms of the sea. Pop. 17,165.—59 0 N. 3, 10 W.

Port-Glasgow, *glas'go*, a seaport in Renfrewshire, on the Clyde, about 3 miles above Greenock. It has an excellent harbour, and enjoys a considerable trade. Pop., including the suburbs, 13,294.

Portobel'lo, a town on the Firth of Forth, 3 miles S.E. of Edinburgh, a great resort for sea-bathing. Pop. 6926.

Portpat'rick, a seaport in Wigtownshire, with a good harbour. From this to Donaghadee is the shortest passage between Scotland and Ireland, the distance being only 21 miles. Pop. 591.—54, 50 N. 5, 6 W.

Portree', the chief town of the Isle of Skye; it is situated on the Sound of Raasay. Pop. 893.

Portsoy', a thriving seaport in Banffshire, on the Moray Firth. Pop. 2091.

Prestonpans', a small seaport in Haddingtonshire, near which the royal forces under Sir John Cope were signally defeated by the Highlanders in 1745. Pop. 2265.

Queensfer'ry, South, a seaport in Linlithgowshire, long the chief ferry on the Firth of Forth. A railway bridge from here across the Forth to North Queensferry is being erected. Pop. 1966.

Ran'noch, Loch, a lake in Perthshire, 10 miles long, discharging itself by the Tummel, at the eastern extremity.

Ren'frew, a royal and parliamentary burgh, and the county town of Renfrewshire, on the Clyde. Pop. of royal burgh 5115; of parliamentary burgh 4825.

Ren'frewshire, anciently called *Strathgryfe*, a county bounded N. by the Clyde; E. by Lanark; S. by Ayr; and W. by the Firth of Clyde. Area 245 sq. m.; pop. 263,374. The surface is mostly flat, except in the W., where there is a large extent of hill and moor. The chief rivers are the *Clyde*, *White Cart*, *Black Cart*, and *Gryfe*. Although

not the county town, *Greenock* is the most important place in the county so far as population is concerned. Its commerce is very considerable, and among its manufacturing establishments are iron shipbuilding yards, at which have been built some of the largest and finest ocean steamers in the world. The sugar-refineries are numerous and on an extensive scale. Other works are engine-factories, iron-foundries, and cotton-mills. The coal, ironstone, and other mineral deposits of the county employ large numbers of the population, and constitute a great source of commerce and wealth.

Ros'lin, a village in Edinburghshire, 7 miles S.W. from the capital, picturesquely situated on the North Esk, with a Gothic chapel, recently restored, and the ruins of an ancient castle. Pop. 611.

Ross (a promontory), a county stretching across the N. part of the country from the Moray Firth to the Minch; it comprises the districts of *Easter* and *Wester Ross*, the island of *Lewis*, and the peninsula lying between the Beauly and Cromarty Firths, called the *Black Isle*, or *Edderdail*, *i.e.*, "the land between the two seas," or *Ardmeanach*, *i.e.*, "the monk's height." The county is bounded on the N. by Sutherland, and on the S. by Inverness. Area, including Cromarty (with which it is united), 3129 sq. m.; pop., including Cromarty, 78,547. The W. coast is deeply indented with numerous lochs, the chief of which are Lochs *Broom*, *Ewe*, *Torridon*, *Carron*, *Alsh*, and *Gair Loch*—all arms of the sea. The aspect of the country is wild and mountainous, intersected by beautiful glens, lakes, and rivers. Some of the mountains are of considerable altitude, such as *Ben Dearg*, which is 3551 feet; *Ben Wyvis*, 3429 feet; *Ben Alligin*, 3015 feet; and *Ben Clachan*, 2028 feet above the sea. The high districts afford abundant pasturage for sheep and cattle, and the glens produce grain crops of a superior quality. Fresh-water lakes are numerous, and give rise to many small streams, which intersect the county in all directions. The most important lakes are *Loch Maree* (13 miles long) and *Loch Luichart*. The manufactures of Ross-shire are unimportant; but the fisheries are extensive and valuable.

Rothesay, *roth'say*, the county town of Buteshire, in the Isle of Bute, on a beautiful bay, a place of considerable trade, and a great resort for sea-bathing. Pop. 8329.—55, 50 N. 5, 0 W.

Rox'burgh (the rock fortress, named from a strong castle situated on a rock near the junction of the Teviot and the Tweed), a village in Roxburghshire, 4 miles S. of Kelso, with the ruins of a castle, at the siege of which James II. was killed by the bursting of a cannon in 1460. Pop. 1012 p.

Rox'burgh, one of the most interesting and beautiful counties in the country. It lies to the S. of Berwickshire, and is separated from England by the Cheviot Hills. On the W. is Selkirkshire, and Dumfriesshire is on the S.W. Area 665 sq. m.; pop. 53,442. It embraces the ancient districts of *Teviotdale* and *Liddesdale*, so named from the *Teviot* and the *Liddel*, by which they are watered. Towards the N. and W. the country is mountainous, but on the S. and E. it is level and fertile. The scenery is varied and picturesque. The *Cheviots* do not rise to any great height, the most elevated part not exceeding 2676 feet. The herbage is green to the summit, and affords pasturage to vast flocks of sheep, which are here the chief stock of the farmers. The N. districts are watered by the *Tweed*, besides which and the *Liddel* and *Teviot*, there are in the county numerous streams, locally called "waters," such as the *Jed*, *Gala*, *Allan*, *Ale*, and *Slitrig*. Roxburghshire possesses a very interesting history in connexion with border feuds of former days, and exhibits many relics of those warlike times in the shape of castles, towers, and other fortified edifices. It has also several magnificent remains of monastic life and institutions.

Ruth'erglen, commonly *Rug'len*, a town in Lanarkshire, about 2½ miles from Glasgow. Pop. 11,265.

Ry'an, Loch, an inlet of the sea in Wigtownshire, about 10 miles long, and from 2 to 4 broad.

St Abb's Head, a promontory on the N.E. of Berwickshire, about 10 miles N. of Berwick. It took its name from a nunnery founded here in the 7th century by St Ebba or Abba, daughter of Ethelfrith, King of Northumberland.—55, 55 N. 2, 9 W.

St An'drews, an ancient city, royal and parliamentary burgh, and seat of a university, in Fifeshire, on a bay of the North Sea. It took its present name from certain relics of St Andrew the Apostle which were kept here in a shrine in the cathedral. It was long

the ecclesiastical capital of the kingdom, and was the scene of Wishart's martyrdom, Cardinal Beaton's assassination, and many other memorable events. Its ancient castle, chapel of St Regulus, and noble cathedral, are now in ruins. Pop. 6458.

St Kil'da, an island in the Atlantic Ocean, 52 miles W. of Harris, one of the Hebrides; it is the abode of numerous sea-fowls, whose feathers are a source of income to the inhabitants. Pop. 77.

St Mary's Loch, a beautiful lake in Selkirkshire, about 3 miles long and 1 mile broad; it is surrounded by charming scenery, and is famous for its trout-fishing.

St Ninians, *nin'yans*, a village in Stirlingshire, 2 miles S. of the town of Stirling, with manufactures of carpets, tartans, etc. Pop. 1647.

Salt'coats, a seaport in Ayrshire, with a considerable trade. Pop. 5096.

San'da, one of the Orkneys, about 12 miles long, and from 1 to 3 broad. Pop 2082.

Sanquhar, *san' kwar*, colloquially *sank'ker*, a town in Dumfriesshire, situated on the Nith. It has considerable manufactures of stockings and carpets. Pop. 1339.

Saturnness', a cape on the coast of Kirkcudbright.—54, 52 N. 3, 35 W.

Schiehal'lion, a conical mountain in Perthshire, rising to the height of 3547 feet. Here Dr Maskelyne made experiments for ascertaining the power of mountains in attracting the pendulum, with a view to determine the mean density of the earth.

Scone, *skoon* (a rising ground), a village in Perthshire, on the Tay, noted for its abbey, where the kings of Scotland used to be crowned. The coronation stone was removed to Westminster Abbey by King Edward I., and still remains there. Pop. 1483.

Sel'kirk, the county town of Selkirkshire, pleasantly situated near the junction of the Ettrick and Yarrow. At Philiphaugh, close by Selkirk, the Marquess of Montrose was defeated by the Covenanters in 1645. Pop. 6090.

Sel'kirkshire, anciently called "Ettrick Forest," is a small inland county, encompassed by the counties of Edinburgh, Roxburgh, Dumfries, and Peebles. Area 257 sq. m.; pop. 25,564. —The surface exhibits a continued succession of mountain ranges of different altitudes, affording excellent pasturage for numerous herds of cattle and flocks of sheep which are reared in the county. Between the hills there are narrow and well-watered valleys of great fertility. The *Tweed* and its tributaries, the *Ettrick* and the *Yarrow*, are the principal streams. The *Yarrow* has prominently attracted the notice of poets, and is referred to in many a Scottish song. It issues from the east end of *St Mary's Loch*, near the W. boundary of the county. The manufactures of Selkirkshire are wool-spinning and the making of tweeds, tartans, shawls, and other goods of similar character, extensively carried on at *Galashiels* and *Selkirk*. Mungo Park, the African traveller, and James Hogg, the poet, known in literature as the "Ettrick Shepherd," were natives of Selkirkshire.

Shet'land. *See* **Orkney.**

Shin, Loch, a lake in Sutherland, about 15 miles in length and from 1 to 2 in breadth.

Skye, one of the largest of the Western Isles, remarkable for its lofty cliffs and spar cave. It is 45 miles in extreme length, and 24 miles in extreme breadth, but its average breadth does not exceed 14 miles; in some places it is only 3 miles broad. Pop. 16,889.—57, 20 N. 6, 20 W.

Sol'way, a firth forming the boundary between England and Scotland for upwards of 50 miles.

Spey, a large and rapid river, which after a course of 100 miles through the counties of Inverness, Banff, and Elgin, falls into the Moray Firth at Garmouth.

Staf'fa, a small island of the Hebrides, on the W. coast of Mull, celebrated for its basaltic columns and caverns. The remarkable cave, which has received the name of Fingal, is 66 feet high, 42 wide, and 227 feet long.—56, 28 N. 6, 20 W.

Stew'arton, a manufacturing town in Ayrshire, on the Irvine. Pop. 3130.

Stinchar, *stin'shar*, a river in Ayrshire, which falls into the sea at Ballantrae.

Stir'ling, the county town of Stirlingshire, with a celebrated ancient castle, commanding a noble prospect of the Forth. It was a favourite residence of the Scottish kings. Here, in 1297, the Scots under William Wallace defeated the forces of King Edward I. of England. P. 16,012.—56, 8 N. 3, 55 W.

Stir'lingshire, a county forming the border-land between the Highlands and the Lowlands of Scotland. It is

bounded on the N. by Perthshire; on the E. by the River Forth and Linlithgowshire; on the S. by the counties of Lanark and Dumbarton; and on the W. by Dumbartonshire. Area 447 sq. m.; pop. 112,443. It extends almost across the isthmus between the Firths of Clyde and Forth. In the W. and N.W. the surface is mountainous, the chief elevation being *Ben Lomond*, which is 3192 feet high. A considerable part of the county consists of the rich alluvial tracts called the Carses of Stirling and Falkirk. The chief rivers are the *Forth*, which rises in Ben Lomond, and, crossing the county, expands into a noble estuary; the *Carron*, which gives name to the celebrated ironworks on its N. bank; the *Bannock*, famous in connexion with the memorable battle of Bannockburn fought on its banks in 1314; the *Kelvin*, which falls into the Clyde; and the *Endrick*, which flows into *Loch Lomond*, a beautifully picturesque lake which lies between the N.W. parts of Dumbarton and Stirling. Minerals of various kinds abound, especially coal and ironstone. The manufactures are important, and are varied in character, embracing carpets, tweeds, tartans, winceys, blankets, serges, chemical products, and paper.

Stoneha'ven, a seaport, the county town of Kincardineshire. In the vicinity are the extensive ruins of Dunnottar Castle, long the seat of the Earls Marischal of Scotland. Pop. 3957.

Storn'oway, a seaport in the island of Lewis, at the head of a bay on its E. coast, with a considerable trade in the white and herring fisheries. Pop. 2693.—58, 11 N. 6, 17 W.

Stranraer, *stran-rawr'*, a seaport of Wigtownshire, at the head of Loch Ryan. It possesses considerable trade, and has an excellent harbour. P. 6415.

Stromness' (the promontory of the current), a seaport in Pomona, one of the Orkney Islands. Pop. 1705.—58, 56 N. 3, 18 W.

Suth'erland (the southern land, so called by the Northmen to denote the land south of Caithness), an extensive county in the N. of Scotland, bounded on the N. and W. by the Atlantic Ocean; by Ross and Cromarty on the S.; the North Sea on the S.E.; and Caithness on the E. Area 2028 sq. m.; pop. 23,370. A considerable part of the county is occupied by forests and mountains. Among the latter may be noted *Ben More*, 3273 feet; *Ben Clibrig*, 3154 feet; and *Ben Hee*, 2864 feet above the sea. There are numerous lakes, the most important being Lochs *Shin*, *Assynt*, *Hope*, *More*, *Elphin*, *Naver*, and *Laoghall*. The rivers are also numerous; the principal are the *Oikel* or *Oykill*, *Fleet*, *Brora*, and *Helmsdale*, all valuable for their salmon fishings. The glens and hollows between the mountains afford excellent pasture for sheep and cattle. A very small proportion of the area is under cultivation, but the extent of arable ground is being yearly increased by the successful efforts of the Duke of Sutherland in reclaiming large tracts of waste land. Sheep farming is the main pursuit. There are no manufactures except woollen goods made for home consumption. The minerals embrace granite, marble, rock crystals, pebbles, and garnets. The fisheries on the coast are important, and consist chiefly of cod, ling, mackerel, lobsters, and herring.

Tain, a royal and parliamentary burgh and seaport in Ross-shire, on the S. shore of the Firth of Dornoch. Pop. of royal burgh 2221; of parliamentary burgh 1742.—57, 51 N. 4, 3 W.

Tar'betness', a cape in the E. of Ross-shire, formed by the Firths of Cromarty and Dornoch.—57, 51 N. 3, 48 W.

Tay, one of the largest rivers in Scotland, passes through Loch Tay, and, swelled by several fine streams, flows by Dunkeld and Perth, after which it is joined by the Earn, expands into a firth, and near Dundee mingles with the North Sea.

Tay, Loch, a beautiful lake in Perthshire, receiving at its S.W. extremity the united stream of the Dochart and Lochy, and discharging its waters by the Tay. It is about 15 miles long, and from 1 to 2 broad.

Teith, a tributary of the Forth, composed of two branches which unite at Callander. It falls into the Forth at the Bridge of Drip, above Stirling.

Te'viot, a beautiful river, which rises on the borders of Dumfriesshire, and joins the Tweed at Kelso.

Thorn'hill, a village in Dumfriesshire, beautifully situated on the Nith. Pop. 1289.

Thur'so, a seaport in Caithness, on the estuary of the river Thurso. Pop. 4055.—58, 35 N. 3, 32 W.

Tin'to, or **Tin'tock**, an isolated hill in Lanarkshire, rises 2335 feet above the level of the sea, and 1694 feet above the Clyde.

Tiree′, a small island, one of the Hebrides, noted for its beautiful marble. Pop. 2730.—56, 32 N. 6, 54 W.

Tobermo′ry, a seaport in the island of Mull, situated near the N.W. extremity of the Sound of Mull. Pop. 1200.—56, 38 N. 6, 1 W.

Troon (the promontory), a seaport in Ayrshire. Pop. 2383.

Tweed, one of the principal rivers of Scotland, rises in Tweedsmuir, on the confines of Peeblesshire, near the sources of the Clyde and Annan; it pursues an easterly course, passing Peebles, Abbotsford, and Melrose. Four miles below Kelso, it becomes the boundary between England and Scotland, and falls into the North Sea at Berwick.

Uist, *wist*, **North and South**, two islands of the Hebrides, belonging to Inverness-shire. Pop. of N. Uist, 3371; of S. Uist, 3825.

Unst, the most northerly of the Shetland Isles. Pop. 2173.

Whit′horn, a seaport in Wigtownshire, on the Bay of Wigtown, with the ruins of a cathedral, on or near the site of the first Christian church built in Scotland. Pop. 1653.

Wick, a seaport, the county town of Caithness-shire, at the mouth of a river of the same name, the chief seat of the Scotch herring-fishery. Pop. 8026.—58, 24 N. 3, 5 W.

Wig′town, a seaport, the county town of Wigtownshire. Pop. 1722.

Wig′town Bay, a fine bay of the Solway Firth, running northward between the counties of Wigtown and Kirkcudbright.

Wig′townshire, or West Galloway, a maritime county in the S.W. of Scotland, bounded N. by Ayrshire; E. by Wigtown Bay and the river Cree, which separate it from Kirkcudbright; S. by the Irish Sea; and W. by the Irish Channel. Area 485 sq. m.; pop. 38,611. It is divided into three districts:—the *Rhinns*, or "the peninsula," which lies W. of Loch Ryan and Luce Bay; the *Machers*, or the "flat country," between Wigtown and Luce Bays; and the *Moors*, which includes the remainder of the county. No part is above 13 miles from the sea. The physical aspect of the county is neither striking nor varied. Its surface is irregular, but its most elevated part is not above 500 feet high. The *Cree* and *Bladenoch* are the chief rivers, both partially navigable, and the county contains a number of small lakes. The coasts are indented by several spacious bays and harbours, such as *Loch Ryan*, on the N.W., which extends inland about 9 miles; *Luce Bay*, on the S.; and *Wigtown Bay*, on the E. These two bays form remarkable promontories—the *Burrow Head* and the *Mull of Galloway*, the latter being the most southerly point of Scotland. There being no manufactures beyond those required for local purposes, and almost no mining operations, agriculture is the principal source of occupation. In ancient times the inhabitants of E. and W. Galloway were designated the "wild Scots of Galloway," from their savage disposition, and their peculiar mode of warfare, and they were so conspicuous for their daring intrepidity and heroism, that they were allowed the privilege of forming the van in every battle at which they were present.

Wrath, Cape, a dangerous promontory in Sutherlandshire, the N.W. point of the mainland of Scotland.—58, 37 N. 5, 0 W.

Yell, one of the Orkney Islands, divided from mainland by Yell Sound. Pop. 2529.

IRELAND

Is bounded N., W., and S. by the Atlantic Ocean; E. by St George's Channel, the Irish Sea, and the North Channel. It contains 32,447 square miles. The population in 1881 was 5,160,000.

Ireland is divided into four provinces,—**Ulster, Leinster, Connaught, Munster**;—which are subdivided into 32 counties, viz.:—

ULSTER.

Counties.	Chief Towns.
Donegal................	Lifford, Donegal, Ballyshannon, Letterkenny, Moville, Bundoran.
Londonderry	Londonderry, Coleraine, Newtownlimavady.
Antrim.................	Belfast, Carrickfergus, Lisburn, Antrim, Ballymena, Larne, Portrush.
Tyrone.................	Omagh, Dungannon, Strabane, Newtown-Stewart.
Down....................	Downpatrick, Newry, Dromore, Newtownards, Donaghadee.
Armagh................	Armagh, Lurgan, Portadown.
Monaghan.............	Monaghan, Clones, Carrickmacross.
Fermanagh...........	Enniskillen.
Cavan	Cavan, Cootehill, Belturbet.

LEINSTER.

Longford..............	Longford, Edgeworthstown, Granard.
Westmeath...........	Mullingar, Athlone, Kilbeggan, Castlepollard.
Meath	Trim, Navan, Kells.
Louth	Drogheda, Dundalk, Ardee, Carlingford, Greenore.
Dublin	DUBLIN, Balbriggan, Kingstown, Skerries.
Wicklow	Wicklow, Arklow, Rathdrum, Bray, Baltinglass.
Kildare.................	Naas, Athy, Kildare, Newbridge, Maynooth.
King's County.......	Tullamore, Philipstown, Parsonstown, Banagher.
Queen's County......	Maryborough, Portarlington, Mountrath, Mountmellick.
Carlow	Carlow, Tullow.
Kilkenny	Kilkenny, Callan, Thomastown.
Wexford...............	Wexford, New Ross, Enniscorthy.

CONNAUGHT.

Leitrim	Carrick-on-Shannon, Manor-Hamilton.
Sligo....................	Sligo.
Mayo	Castlebar, Ballinrobe, Ballina, Westport.
Roscommon...........	Roscommon, Boyle, Elphin.
Galway	Galway, Loughrea, Tuam, Gort, Ballinasloe, Clifden.

MUNSTER.

Tipperary	Clonmel, Cashel, Tipperary, Carrick-on-Suir, Roscrea, Nenagh, Thurles, Cahir.
Clare	Ennis, Kilrush, Killaloo, Ennistimon, Kilkee.
Limerick...............	Limerick, Rathkeale, Newcastle.
Kerry	Tralee, Dingle, Killarney.
Cork	Cork, Bandon, Kinsale, Youghal, Mallow, Fermoy, Queenstown, Charleville.
Waterford............	Waterford, Dungarvan, Lismore, Tallow.

Islands.—Rathlin Isle, North Isles of Arran, Achil, Clare Island, South Isles of Arran, Valentia.

Bays, etc.—Belfast Lough, Bays of Strangford, Dundrum, Carlingford, Dundalk, Dublin; Harbours of Wexford, Waterford, Cork; Bays of Dunmanus, Bantry, Kenmare, Dingle,

Tralee, Galway, Clew, Sligo, Donegal: Lough Swilly, Lough Foyle.

Capes.—Malin Head, Fair Head, Howth Head, Wicklow Head, Carnsore Point, Cape Clear, Mizzen Head, Loop Head, Slyne Head, Achil Head, Urris Head.

Lakes.—Neagh, Erne, Killarney, Allen, Conn, Mask, Corrib, Ree, Derg.

Rivers.—Shannon, Barrow, Nore, Boyne, Liffey, Slaney, Suir, Blackwater, Lee, Bandon, Bann, Lagan, Mourne, Foyle.

Mountains.—Mourne, Slieve Bloom, Wicklow, Macgillicuddy Reeks, Mangerton, Mount Nephin, Croagh Patrick.

REMARKS.

Ireland extends from 51° 26′ to 55° 23′ N. lat., and from 5° 24′ to 10° 30′ W. long. Its greatest length is 280 miles, and its greatest breadth 180 miles.

The coasts of Ireland, for the most part bold and rocky, are so much indented that no part of the interior is more than 50 miles distant from the sea. One-fourth of the entire surface is occupied by a central limestone plain, with hilly or mountainous districts all round, except at the bays of Dublin and Galway, where the plain reaches the coast. This plain is so low that the highest point between Dublin and Galway rises only 320 feet above the ocean-level. Great part of the limestone is covered with bog averaging 25 feet in depth; and this is the Bog of Allen, of which Tullamore, King's County, may be taken as the centre. The only considerable interruption of the central plain is formed by the Slieve Bloom Mountains, which run in a south-westerly direction from King's and Queen's counties into Tipperary, where they culminate in the Keeper, 2265 feet. The drainage of the plain is mostly southwestward by the Shannon, the longest river in the British Isles, and navigable for 240 miles to Lough Allen, Leitrim. All the highest mountains in Ireland rise towards the western coast, the highest of all being Carn Tual, 3414 feet, a summit of the Macgillicuddy Reeks, in Kerry.

Of minerals, the marbles of Kilkenny, Galway, and Donegal are alone known as Irish. The so-called mountain-limestone, though of the same formation as that which in England is rich in lead, yields but little of that metal in Ireland. Iron is mined in Antrim, but there is not much of it to mine; and the two coal-fields, that of Kilkenny, and the south-western one, which is most worked on the north bank of the Blackwater, yield coal of a very inferior description. The consequence is that manufactures are limited, and that a larger population has accumulated on the land than the land can employ and feed. Irish linens are produced in Ulster. Dublin manufactures poplin, a fabric of silk and worsted, and

brews porter not inferior to that of London. But the main industry is agriculture; and the main trade of Ireland consists in the exportation, and that chiefly to Great Britain, of cattle and other agricultural produce, and in the importation of manufactured articles and colonial produce. The soil is superior even to that of England; but the extension of good husbandry is limited by the poverty of the small farmers, and the dropping climate favours grass and roots, as potatoes and turnips, rather than grain and fruit. Irish pork and Belfast hams are in repute; Cork butter is not of the highest quality, because of defects in the making.

Recent legislation has deferred markedly to the wishes of the majority of the Irish people. The Protestant Episcopal Church, which had been the state church in Ireland since the Reformation, was naturally disliked by the great majority, because the great majority were, as they still are, Roman Catholics. Accordingly, by an Act of Parliament passed in 1869, that church was disestablished and disendowed from 1st January 1871, and there is now no established church in Ireland. Trinity College, Dublin, was at the same time secularized, so as to be, like the Queen's Colleges at Belfast, Galway, and Cork, unconnected with any church in particular. Elementary schools, though legally of the same neutral character, had long been really managed by Roman Catholic priests wherever the mass of the pupils belonged to Roman Catholic parents; and, in order to exercise like control over the higher education, the Roman Catholic hierarchy have founded a Roman Catholic University in Dublin, denouncing the state-supported colleges as "godless," because religion is not specially taught in them.

It is partly due to the British connexion that Ireland is traversed in all directions by excellent roads; that Dublin is united to the Shannon by two canals, the Grand and the Royal, cut across the central plain; and that Loughs Neagh and Erne are joined by the Ulster canal. Moreover, the taxation was kept lighter than in Great Britain, and large subsidies were granted from time to time out of the Imperial Exchequer. Meanwhile, however, the negligence of the proprietors of the soil, many of whom were absentees, many also really poor, and the improvidence of the occupiers, produced their natural result: as population increased, the small holdings were divided into still smaller, until, especially in the west and south, they could neither employ nor support the occupiers; and when, in 1845, the potato crop failed, famine ensued, and an exodus to America commenced, which, from 1st May 1851 to 31st December 1881, amounted to 2,715,604. The bitter feeling which the emigrants carried with them passed on to their children, and is directed against the British government; so that the American Irish are now the mainstay of discontent in Ireland itself. By exceptional legislation, the occupiers of the soil in Ireland have been recently placed in so advantageous a position that the farmers of Great Britain are claiming similar legislation in their own behalf; and, to relieve

the overcrowded districts, both migration and emigration are being promoted at government expense. Notwithstanding the sympathy of perhaps the majority of the Irish with a political party which aims at some separation of Ireland from Great Britain, the British government counts upon a policy of justice and generosity to win them over. And could an end be made of impracticably small holdings, the number of which is yearly diminishing, there would be an end also of that chronic destitution, congested on a large scale in particular districts, which keeps alive the traditional sense of wrong.

Continuous quiet is the one thing needed for the prosperity of Ireland. Capital would then flow into it and develop its resources, and money-spending tourists would be attracted to the picturesque county Wicklow and the lakes of Killarney, the cliffs of Kilkee and Moher in county Clare, the wilds of Connemara and the Giant's Causeway, Antrim. These attractive sites labour under the disadvantage of being comparatively isolated, so that they can be reached in succession only by long journeys through uninteresting country; but many would find compensation in the cheeriness and warm-heartedness of the natives, in whose conversation sprightliness answers to the proverbial eloquence of Irish orators. In the population of Ulster, which far surpasses the other provinces in respect of manufactures, there is a large admixture of Scotch blood, and the Presbyterian form of Christianity has a large following; there, accordingly, the sprightliness of the Celt alternates with the sedateness of the Saxon, or is modified by it.

EXERCISES.

How is Ireland bounded? What is its extent in square miles? Into how many provinces is it divided? How many counties do they contain? What are the counties in Ulster? In Leinster? In Connaught? In Munster? Name the principal towns in Donegal, in Londonderry, in Antrim, etc.

Name the principal islands of Ireland. Name its bays. Name its capes. Name the principal lakes. Name the principal rivers. Name the principal mountains. Where is Dingle, Coleraine, Downpatrick, Sligo, Navan, Enniskillen, Ennis, Youghal, Tuam, Tralee, Maryborough, Mullingar, Athy, Dundalk? etc.

Where is Slyne Head, Killarney Lakes, Lough Swilly, Urris Head, Malin Head, Lough Allen, Lough Derg? etc.

Between what degrees of latitude and longitude is Ireland situated? What are its greatest length and breadth? Of what nature at the surface, and below it, in the central plain? At what two bays does the plain reach the sea, and what is the height of the summit-level between these bays? What town may be taken as the centre of the bog of Allen? What mountains interrupt the level of the central plain? What is notable about the Shannon in itself, and in connexion with the central plain? On what side of the central plain are the highest mountains found? Give the name, height, and whereabouts of the highest mountain in Ireland.

What counties yield Irish marble? What difference is there between

the mountain-limestone of Ireland and that of England? Where and of what quality are the two coal-fields of Ireland? Which province is the seat of the linen manufacture? For what two articles is Dublin famous? Of what nature are the chief exports and imports of Ireland? What kind of agricultural produce is favoured by the climate? What is said of Belfast hams and Cork butter respectively?

When and why was the Protestant Episcopal Church in Ireland disestablished and disendowed? In what three towns do Queen's Colleges exist? Why does the Roman Catholic hierarchy call them "godless"? Under whose management have most of the elementary schools naturally fallen?

Name the three great canals of Ireland, and trace their courses. Account for the great difficulty of finding a livelihood in the west and south. What led to the great exodus of the Irish to America? How many millions emigrated in the course of thirty years? Mention a fact showing that recent Land Acts have placed Irish occupiers of the soil in very favourable circumstances. What keeps alive the traditional sense of wrong?

How would order and quiet further the prosperity of Ireland? What five counties offer what attractions to tourists? Under what disadvantage does the tourist labour in Ireland? What pleasing characteristic does he meet with in the natives? Wherein does the population of Ulster differ from that of the other provinces?

DESCRIPTIVE TABLE.

Ach'il, an island 30 miles in circuit, belonging to the county of Mayo, from which it is separated by a narrow channel. Pop. 5060.

Ach'il Head, a promontory forming the W. point of Achil Island.—53° 58' N. lat. 10° 14' W. long.

Al'len, Lough, an expanse of the Shannon, in the county of Leitrim.

An'trim (the ford at the alder trees), a town in the above county, at the N.E. extremity of Lough Neagh. Pop. 1647.

An'trim, a maritime county in the province of Ulster. The river Lagan separates it from Down, and the Bann from Londonderry; on the N. is the Atlantic, and on the E. the North Channel. Area 1164 sq. m.; pop. 421,943. Near the coast the surface is elevated, declining towards the S.W., where much of the soil is boggy. In the hilly region iron ore is found in considerable quantities. The principal bays are *Belfast Lough* and *Larne Lough*. In the S.W. is the extensive lake called *Lough Neagh*, the water of which is remarkable for its petrifying quality. The famous *Giant's Causeway*, one of the most perfect specimens of columnar basalt in Europe, is on the N. coast. The chief industry of Antrim is the manufacturing of linen and cotton.

Ardee', an ancient town in Louth, on the Dee. Pop. 2622.

Ark'low, a seaport in Wicklow, on the Avoca. Pop. 4777.

Armagh, *ar-ma'*, a county in the S.E. of Ulster. It is surrounded by Tyrone, Lough Neagh, Down, Louth, and Monaghan. Area 512 sq. m.; pop. 163,177. In the S.W. the surface is mountainous, the *Slieve-Gullion* rising to the height of 1893 feet above the sea; elsewhere the country is flat and undulating, with a considerable extent of bog. The county is well watered by numerous streams, the chief of which are the *Callan* and the *Blackwater*. The *Newry Canal* skirts the county on the E. The population combine agricultural pursuits with the weaving of cotton and linen.

Armagh', the capital of the above county, and at one time the metropolis of Ireland. Pop. 10,070.—54, 21 N. 6, 40 W.

Ar'ran, North Isles of, a group on the W. coast of Donegal.—**South Isles of**, a group at the entrance of Galway Bay, containing many interesting remains of the forts, churches, and houses of the primitive inhabitants of Ireland.

Askeaton, *as-ka'ton*, an ancient

town in Limerick, at the junction of the Shannon and Deel. Pop. 891.

Ath'boy (the yellow ford), a town in Meath. Pop. 748.

Athlone', a town on the Shannon, partly in Westmeath and partly in Roscommon. Pop. 6500.—53, 26 N. 7, 54 W.

Athy', a town of Kildare, intersected by the Barrow. Pop. 4181.—53, 0 N. 6, 58 W.

Augh'rim, a village in Galway, memorable for the signal victory gained by General Ginckle over the forces of James II. in 1691, which decided the fate of Ireland. Pop. 767.

Bagenalstown, *bag'nals-town*, a town in Carlow, on the Barrow. Pop. 2141.

Balbrig'gan, a seaport in the county of Dublin, noted for the manufacture of imitation silk stockings of very fine texture. Pop. 2443.

Balli'na, a town in Mayo, pleasantly situated on the river Moy, over which is a bridge of 16 arches, which unites it to the town of Ardnaree. Pop. 5760.

Ballinasloe', a town, partly in Galway, partly in Roscommon, famous for a large cattle fair. Pop. 4772.

Ballinrobe', a town in Mayo. Pop. 2286.

Ballycas'tle, a seaport in Antrim, in the vicinity of romantic scenery and extensive coal-mines. Pop. 1932.—55, 12 N. 6, 15 W.

Ballyme'na, a town in Antrim, on the Maine, with a considerable linen trade. Pop. 8883.

Ballymo'ney, a town in Antrim, with good markets. Pop. 3049.

Ballyshan'non, a seaport in Donegal, beautifully situated at the mouth of the river flowing out of Lough Erne. Pop. 2840.—54, 30 N. 8, 10 W.

Bal'timore, a seaport in Cork, with an excellent harbour.

Bal'tinglass, a town in Wicklow, in a beautiful vale on the Slaney, with extensive woollen and linen manufactures. Pop. 1151.

Banagher, *ban'a-her*, a town in King's County, on the Shannon. Pop. 1192.

Ban'bridge, a town in Down, on the Bann, with a considerable linen trade. Pop. 5609.

Ban'don, a town in the county of Cork, situated on the river Bandon, which falls into the sea at Kinsale. Pop. 5949.—51, 45 N. 8, 42 W.

Ban'gor, a town in Down, on Belfast Lough, the site of a monastery famous in the Dark Ages. Pop. 2560.

Bann, a river which rises in Down, passes through Lough Neagh, and falls into the sea 4 miles below Coleraine.

Ban'try Bay, a fine bay in the county of Cork, 30 miles long and from 4 to 6 broad. Here, in 1796, a body of French troops effected a landing, but were taken prisoners.

Ban'try, a seaport in the county of Cork, at the head of Bantry Bay. Pop. 2632.—51, 41 N. 9, 27 W.

Bar'row, a river in Leinster, which rises in Queen's County, separates that county and Kilkenny on the W. from Kildare, Carlow, and Wexford on the E.; and, after receiving the Nore and Suir, falls into Waterford harbour.

Belfast', a flourishing seaport, and the county town of Antrim, at the head of Belfast Lough, with extensive manufactures of linen and cotton, and a great export trade. Here is one of the Queen's Colleges. Pop. 208,122.—54, 35 N. 5, 55 W.

Belfast' Lough, or **Carrickfer'gus Bay**, an estuary at the mouth of the Lagan, on the E. coast of Antrim, affording safe anchorage for shipping.

Beltur'bet, a town in Cavan, on the Erne, in the vicinity of extensive linen manufactures. Pop. 1807.

Bess'brook, a town in Armagh, with large spinning-mills in the neighbourhood. Pop. 3126.

Birr. *See* **Parsonstown.**

Blackrock', a town in the county of Dublin, a celebrated sea-bathing place, with many fine villas. Pop. 8902.—53, 18 N. 6, 13 W.

Black'water, a river which rises on the borders of Kerry, and, flowing through the counties of Cork and Waterford, enters the sea at Youghal Bay.

Boyle, a town in Roscommon, pleasantly situated on a stream of the same name. Pop. 2994.

Boyne, a river which rises in Kildare, and, flowing through Meath, falls into the sea below Drogheda. This river is famous for the decisive battle in which William III. defeated the troops of James II. in 1690.

Bray, a seaport in Wicklow. Pop. 6535.—53, 12 N. 6, 8 W.

Bundo'ran, a village in Donegal, on Donegal Bay; it is the principal watering-place on the N.W. coast. Pop. 703.

Ca'hir, a town in Tipperary, on the Suir, with the ruins of an ancient castle and abbey. Pop. 2469.

Cal'lan, a town in Kilkenny, on King's River, once a place of importance. Pop. 2340.

Cappoquin', an ancient town in the county of Waterford, on the Blackwater. Pop. 1555.

Car'lingford, a town in Louth, on Carlingford Bay. Pop. 727.

Car'lingford Bay, a fine haven in Louth, having 20 fathoms of water, but beset by dangerous rocks.

Car'low, a small inland county in Leinster, surrounded by Kildare, Wicklow, Wexford, Kilkenny, and Queen's county. Area 346 sq. m.; pop. 46,568. The country adjoining Wicklow and Wexford is hilly in character, *Mount Leinster*, in the S.E., attaining the height of 2604 feet. The chief rivers are the *Slaney* and *Barrow*. Carlow is essentially an agricultural county.

Car'low, the county town of Carlow, beautifully situated on the Barrow. Pop. 7185.—52, 51 N. 6, 54 W.

Carn'sore Point, in Wexford, the S.E. point of Ireland.—52, 11 N. 6, 23 W.

Carrickfer'gus, a seaport in Antrim, on Belfast Lough. It is a place of great antiquity, and has a strong castle, situated on a rock projecting into the sea. Pop. 10,009.—54, 43 N. 5, 49 W.

Carrickfer'gus Bay. *See* Belfast Lough.

Carrickmacross', a town in Monaghan. Pop. 2002.

Car'rick-on-Shan'non, the county town of Leitrim. Pop. 1384.

Car'rick-on-Suir, a town in Tipperary, with extensive woollen manufactures. Pop. 6583.

Cash'el (from Irish *caiseal*, a circular stone fort), a city in Tipperary, and an ancient episcopal see. It lies at the foot of a remarkable eminence called the Rock of Cashel, rising abruptly from the plain, and crowned with the ruins of a cathedral and other ancient buildings. Here, in 1172, a council was held which decreed that the Irish Church should be reformed on the model of the English Church. Pop. 8961.

Castlebar', the county town of Mayo, with considerable trade, particularly in linens. Pop. 3855.

Castleblay'ney, a town in Monaghan, in a beautiful district. Pop. 1810.

Castle-Com'er, a handsome town in Kilkenny, with a great trade in coals and butter. Pop. 1182.

Castle-Pol'lard, a town in Westmeath. Pop. 852.

Cav'an, an inland county in Ulster, bounded on the N. by Fermanagh and Monaghan; on the E. by Monaghan and Meath; on the S. by Meath, Westmeath, and Longford; and on the W. by Leitrim. Area 746 sq m.; pop. 129,476. The county is mountainous on the borders, especially in the N., enclosing an open country interspersed with bog. The principal rivers are the *Woodford* and *Upper Erne*. Lakes are numerous, and several of them are highly picturesque. The minerals found embrace coal, iron, copper, and lead. There is a number of mineral springs, of which *Swanlibar* is the most celebrated. Agricultural industry employs the great bulk of the population.

Cav'an, the county town of Cavan, situated on a small stream of the same name. Pop. 3050.

Charleville, *sharl'vil*, a town in Cork. Pop. 2266.

Clare, an island at the mouth of Clew Bay, off the coast of Mayo.

Clare (a level piece of land), a maritime county in the N. of Munster, bounded on the N. by Galway Bay and Galway; on the E. and S. by the Shannon, which separates it from Tipperary, Limerick, and Kerry; and on the W. by the Atlantic Ocean. Area 1294 sq. m.; pop. 141,457. The surface is diversified with mountain, valley, stream, and lake. In the E. are the *Inchiquin*, *Slieve-Baughta*, and *Slieve-Barnagh* Mountains; and in the W. is *Mount Callan*. The county possesses about 100 small lakes. The chief rivers are the *Shannon* and the *Fergus*. The coast is rocky, and in some places exhibits bold precipitous cliffs 400 feet high; it is indented with several bays, the largest being that of *Liscannor*. The minerals embrace coal, iron, lead, and manganese. There are marble and slate quarries, and many chalybeate springs. The chief trade is in cattle, sheep, corn, and provisions.

Clare (the town on the plain), a town in Mayo. Pop. 1319.

Clear, Cape, a promontory in the S. of Cape Clear Island, off the coast of Cork, about six miles from the mainland, and surmounted by a lighthouse. —51, 26 N. 9, 29 W.

Clew Bay, a bay in Mayo, 12 miles long and 7 broad.

Clif'den, a seaport town in Galway, on an inlet of Ardbear harbour. Pop. 1287.

Clogher, *klo'her* (a stony place), an ancient city in Tyrone, formerly the seat of a bishop—now reduced to a straggling village. Pop. 225.

Clonakil'ty, a thriving town in the county of Cork, with a great trade in linens. Pop. 3676.

Clones, a town in Monaghan, with some interesting antiquities. Pop. 2216. —54, 12 N. 7, 13 W.

Clonmel', the county town of Tipperary, pleasantly situated on the Suir. Pop. 9325.—52, 21 N. 7, 41 W.

Clontarf', a township in the county of Dublin, 3 miles E.N.E. of Dublin City. Pop. 4210.

Cloyne, a town in Cork, and a bishop's see, united to that of Cork and Ross. Pop. 1126.

Coleraine, *kol-rain'*, a town in Londonderry, on the Bann, noted for the manufacture of linen. Pop. 6694.— 55, 8 N. 6, 43 W.

Conn, a lake of considerable extent in the county of Mayo.

Con'naught, a province in the W. of Ireland. It continued a distinct kingdom till the reign of Henry IV. of England. It is still the rudest and most unimproved part of Ireland. Pop. 821,657.

Connema'ra (bays of the sea), a district occupying the W. portion of Galway; it is subdivided into Connemara Proper, Jar Connaught, and Joyce Country.

Cooks'town, a town in Tyrone, with good markets. Pop. 3870.

Cootehill', a town in Cavan, with excellent linen markets. Pop. 1789.

Cork, the largest and most southerly county of Ireland. It is bounded on its landward sides by Kerry, Limerick, Tipperary, and Waterford. Area 2885 sq. m.; pop. 495,607. The W. part of the county is mountainous; the N. and E. parts are exceedingly fertile. The coast is indented with numerous bays, the principal being *Bantry*, *Dunmanus*, *Clonakilty*, *Kinsale*, *Cork Harbour*, and *Youghal*. Off the coast are several islands, the most important of which are *Cape Clear* and *Whiddy*. The chief rivers which water the county are the *Blackwater*, *Lee*, and *Bandon*. Iron, copper, and limestone are the principal minerals. Cork is mainly an agricultural county, but the fisheries along the coast form a valuable branch of industry, and the copper-mines at *Allahais* employ about 2000 hands.

Cork, the capital of the county of Cork, is an important city, at the mouth of the Lee, on one of the safest and finest harbours in Europe. It possesses great trade, particularly in the export of grain and all kinds of provisions. Here is one of the Queen's Colleges. Pop. 104,496.—51, 55 N. 8, 26 W.

Cor'rib, a beautiful lake in Galway, 24 miles long and about 4 broad, studded with islands.

Cove. *See* **Queenstown**.

Croagh Patrick, *crogh pat'rick*, a mountain in Mayo, on the S.E. of Clew Bay, 2660 feet above the level of the sea.

Derg, Lough, a lake formed by the expanse of the Shannon, separating Galway and Clare from Tipperary, 18 miles long and 4 broad.—Another lake in Donegal, a famed religious pilgrimage of the Roman Catholics.

Der'ry. *See* **Londonderry**.

Din'gle, a seaport in Kerry, on Dingle Bay, the most westerly town in Ireland. Pop. 1833.—52, 9 N. 10, 16 W.

Donaghadee, *don-a-ha-dee'*, a seaport in Down, on the Irish Channel, 21 miles distant from Portpatrick in Scotland. Pop. 1861.—54, 38 N. 5, 33 W.

Donegal', a large maritime county in the N. of Ireland. Its landward boundaries are Londonderry, Tyrone, Fermanagh, and Leitrim. Area 1865 sq. m.; pop. 206,035. The surface is mountainous and boggy. Lakes are numerous, but small; in the largest, *Lough Derg*, is the island called *St Patrick's Purgatory*, a celebrated place of Roman Catholic pilgrimage. The county is watered by many unimportant rivers, the principal of which are the *Foyle* and the *Swilly*. *Lough Foyle*, *Lough Swilly*, *Sheephaven*, *Guybarra Bay*, *Donegal Bay*, and a number of other inlets, indent the coast, off which are numerous small islands, 17 of which are inhabited. The largest is *North Arran*. The occupations are mainly agricultural, but a linen trade is also carried on, of which *Raphoe* is the centre, and many of the female population are engaged in working muslin for the Belfast and Glasgow manufacturers.

Donegal', a town in the county of Donegal, on a bay of the same name, with a fine old castle. Pop. 1416.

Doneraile', a town in the county of Cork, seated on the Aubeg; the scenery in the vicinity is much admired. Pop. 1208.

Down, a county in the S.E. of Ulster; it lies to the S. of Antrim, having Armagh as its W. boundary, and the Irish Sea on the S. and E. Area 967 sq. m.; pop. 272,107. The surface is hilly, rising into mountains in the S., the highest being *Slieve-Donard*, which has an elevation of 2796 feet. The river *Lagan* skirts the county on the N. and the *Bann* on the W. On the coast are *Belfast Lough*, *Strangford Lough* (which penetrates inland about 15 miles), *Dundrum Bay*, and *Carlingford Lough*. Linen is the staple manufacture of the county. The fisheries off the coast are important, and employ about 4000 or 5000 hands.

Downpat'rick, the county town of Down, the see of the bishop of Down, Connor, and Dromore—celebrated as the place of St Patrick's interment. Pop. 3901.—54, 20 N. 5, 43 W.

Drogheda, *dro'heda*, a seaport, and the county town of Louth, intersected by the Boyne. In 1649 it was stormed by Cromwell, who made a terrible slaughter of the inhabitants. Pop. 12,297.—53, 44 N. 6, 20 W.

Dromore', a town in the county of Down, formerly the seat of a bishop. Pop. 2491.

Dub'lin, the metropolitan county of Ireland. It is bounded on the landward sides by Meath, Kildare, and Wicklow; and on the E. is open to the Irish Sea. Area 354 sq. m.; pop. 418,910. Its surface is mostly a rich, well-cultivated, level plain; but at the S. boundary it rises into a range of elevated hills, the loftiest of which, *Kippure*, is 2473 feet above the sea. The only river of note is the *Liffey*. By means of the *Grand* and the *Royal Canals* communication is effected between Dublin and the Shannon. Along the coast are several inlets of the sea, the most important of which is *Dublin Bay*. Not far from the shore are *Lambay Island*, *Ireland's Eye*, and a number of islets. Dublin has more variety of manufs. than any other county in Ireland, but they are generally such as are for home requirements. The produce of the Dublin breweries and Balbriggan hosiery works are, however, largely exported. The fisheries afford a considerable source of income to the villagers along the coast.

Dub'lin, the capital of Ireland, beautifully situated on the Liffey. Its general elegance, and the magnificence of its cathedral and public buildings, rank it among the finest cities in Europe. Pop. 249,602.—53, 23 N. 6, 20 W.

Dub'lin Bay, a spacious bay at the mouth of the Liffey, about a mile below Dublin.

Dundalk, *dun-dawk'*, a seaport in Louth, on Dundalk Bay. Here is a considerable manufacture of cambric. At Fagher, near this town, Edward Bruce, brother of the king of Scotland, and himself crowned king of Ireland, was defeated and slain by the English in 1318. Pop. 11,913.—54, 0 N. 6, 23 W.

Dundalk Bay, an inlet of the Irish Channel on the coast of Louth. At high water it is a considerable harbour, but at low water it is almost dry.

Dundrum', a capacious bay on the coast of Down.

Dungan'non, a town in Tyrone, the ancient residence of the O'Neills, kings of Ulster. Pop. 4084.

Dungar'van, a town in Waterford, situated on Dungarvan Bay, much resorted to for sea-bathing. Pop. 6306.

Dunman'us Bay, a spacious haven in the county of Cork, S. of Bantry Bay.

Dunman'way, a town in the county of Cork, pleasantly situated in a valley on the Bandon. Pop. 2049.

Edge'worthstown, a town in Longford, distinguished as the residence of the popular authoress, Maria Edgeworth. Pop. 842.

El'phin, a market town in Roscommon, near which Oliver Goldsmith was born. Pop. 997.

En'nis, the county town of Clare, on the Fergus, which here becomes navigable by large boats. Its abbey is one of the finest in the island. Pop. 6307. 52, 53 N. 8, 57 W.

Enniscor'thy, a town in Wexford, on the Slaney. Pop. 5666.

Enniskil'len, the county town of Fermanagh, delightfully situated on an island in Lough Erne. Pop. 5712.

Ennisti'mon, a town in Clare, on the Oyna, with a good export trade in corn. Pop. 1331.

Erne, Lough, a beautiful lake in Fermanagh, studded with numerous islands. It consists of two basins, the larger of which extends upwards of 20 miles by 12.

Erne, River, rises in Longford, crosses the county of Cavan, passes through Lough Erne, and flows into Donegal Bay.

Eyrecourt, *air'kort*, a town in Galway, with the ruins of a castle. Pop. 668.

Fair Head, a promontory in Antrim,

636 feet above the sea. It is composed of basaltic pillars, some of them 280 feet in height, the largest yet discovered in any part of the world.—55, 14 N. 6, 9 W.

Fermanagh, *fer-man'ah*, an inland county in Ulster, enclosed by Donegal, Tyrone, Monaghan, Cavan, and Leitrim. Area 714 sq. m.; pop. 84,879. The surface generally presents a succession of abrupt eminences of slight elevation; in the E. and W. it is mountainous. The most attractive feature in the scenery of Fermanagh is *Lough Erne*, which extends from one extremity of the county to the other. It is divided into the Upper and Lower Lough Erne, the former extending from *Wattlebridge* to *Enniskillen*, the county town, and the latter from *Enniskillen* to *Roscar*, where its waters contract and form the river *Erne*. Fermanagh is mainly an agricultural county, only about an eighth of its population being employed in manufactures and trades. Butter is extensively exported.

Fermoy', a town in Cork, on the Blackwater, which is here crossed by a bridge of 13 arches. Pop. 6454.

Feth'ard, a town in Tipperary; it was in former times fortified and surrounded by walls. Pop. 1906.

Foyle, a river in Ulster, which, after passing Londonderry, expands into a fine bay, called Lough Foyle, 16 miles long and 9 broad.

Gal'way, a large maritime county in Connaught; it is bounded landward by the counties of Mayo, Roscommon, King's County, Tipperary, and Clare; and seaward by the Atlantic Ocean. Area 2447 sq. m.; pop. 242,005. *Lough Corrib* divides the county into two districts, named respectively the *East* and the *West*. The E. district is level, and to a large extent arable, but it contains also much bog. The W. district, called *Connemara* and *Joyce's Country*, is rugged and mountainous, and presents some of the wildest and most beautiful scenery in Ireland. The principal rivers are the *Shannon*, *Suck*, and *Blackwater*. *Lough Mask* is partly in this county, and partly in Mayo.
coast, which is rugged and deeply indented by inlets, there are a great many islands, of which the most important is *Inishmore*. Iron and lead ores have been found, but limestone and marble are the chief minerals now worked. In Connemara there is abundance of the beautiful green variegated marble called serpentine. The occupations of the people are mainly of an agricultural character.

Gal'way, the county town of Galway, on the broad stream by which the waters of Lough Corrib are discharged into Galway Bay. Here is one of the Queen's Colleges. Pop. 15,471.—53, 15 N. 9, 3 W.

Gal'way Bay, a large bay between Galway and Clare.

Gi'ants' Causeway, a celebrated promontory and natural curiosity on the N. coast of Antrim, composed of lofty and regular basaltic columns, at least 30,000 in number, which run out a great way into the sea. The Irish name of this promontory means "the *cloghan* or stepping-stones of the Fomorians," and as these sea-rovers were regarded as giants in popular legend, the name came to be translated the "Giants' Causeway."

Gil'ford, a town in Down, on the right bank of the Bann. Pop. 1824.

Gor'ey, a town in Wexford, with extensive fisheries. Pop. 2450.

Gort, a town in Galway. Pop. 1719.

Graiguenamanagh, *graig-na-man'ah* (village of the monks), a town in Kilkenny, beautifully situated on the Barrow, with the ruins of a stately abbey and castle. Pop. 1172.

Granard', a neat town in Longford. Pop. 1828.

Greenore, *green-or'*, a headland and fishing station in Louth, on the side of Carlingford Bay.

Hol'ywood, a town in the neighbourhood of Belfast, county Down, much resorted to as a watering-place. Pop. 3293.

Howth Head, a promontory terminating the peninsula of Howth, on the north of Dublin Bay.—53, 22 N. 6, 4 W.

Kanturk', a town in the county of Cork, near the Blackwater. Pop. 1859.

Kells, an ancient town in Meath, on the Blackwater. Pop. 2822.—53, 44 N. 6, 51 W.

Kenmare' River, an inlet of the sea in the S.W. of Kerry, about 40 miles long.

Ker'ry, a maritime county of Munster, bounded N. by the estuary of the Shannon; E. by Limerick and Cork; S. by Cork and Kenmare estuary; W. by the Atlantic Ocean. Area 1853 sq. m.; pop. 201,039. The surface of the county is chiefly formed of mountain ranges, in which are *Carran Tual*, in *Macgillicuddy Reeks*, the highest mountains in Ireland, with an elevation of 3414 feet; *Caher*, 3200 feet; *Brandon*,

3127 feet; and *Mangerton*, 2756 feet. The principal rivers are the *Feale*, *Maine*, *Laune* or *Lane*, and *Roughty*. The lakes comprise those of *Killarney* (small, but very picturesque), *Carra*, and *Currane*. The coast-line is deeply indented by bays, of which *Tralee*, *Dingle*, and *Kenmare* are the chief. Off the coast is the fertile island of Valentia, the Cis-Atlantic terminus of the telegraph cables. Kerry is rich in minerals. Iron-ore abounds in various places, and copper and lead mines are worked near *Kenmare* and *Tralee*, the latter of which is the chief town. Dairy-farming is the leading industry.

Kilbeg'gan, a town in Westmeath. Pop. 1033.

Kildare', an inland county in Leinster. It is bounded on the N. by Meath; on the E. by Dublin; on the S. by Carlow; and on the W. by Queen's County, King's County, and Westmeath. Area 653 sq. m.; pop. 75,804. The surface is generally flat, and exhibits about 50,000 acres of bog. The rivers *Liffey* and *Barrow* pass through the county, and the *Boyne* has its source near the western boundary. Kildare is also traversed by the *Grand* and *Royal Canals*. The industry of the county is almost wholly agricultural.

Kildare', a town in the county of Kildare, noted for the *curragh* or common in its neighbourhood, the finest race-ground in Europe. Pop. 1174.

Kilkee', a town in Clare, 3 miles W.N.W. of Kilrush. Pop. 1652.

Kilken'ny, a county in the S.W. of Leinster. It is bordered on the N. by Queen's County; E. by Carlow and Wexford; S. by Waterford; and W. by Tipperary. Area 796 sq. m.; pop. 99,531. The surface is undulating and fertile, with a slope towards the S., where several summits have an elevation of 1000 feet. The river *Barrow* borders the county on the E. and the *Suir* on the S.; the *Nore* traverses the middle. The border rivers are navigable for a considerable distance, and so is the Nore for small barges.

Kilken'ny, the capital of the county of Kilkenny, a city of considerable importance, beautifully situated on the Nore. In its vicinity are fine marble quarries. Pop. 12,299.—52, 39 N. 7, 13 W.

Killa'la, a little town in Mayo, which the French occupied for a short time in 1798. Pop. 700.—54, 18 N. 9, 12 W.

Killaloe', *kil-la-lo'*, an ancient town in Clare, on the Shannon, over which there is here a bridge of 19 arches. Pop. 1112.

Killar'ney, a thriving town in Kerry, much frequented on account of its lakes, which exhibit the most beautiful and picturesque scenery in Ireland. Pop. 6651.

Kilrush', a town in Clare, on the Shannon. Pop. 3805.

King's County, in the W. of Leinster, is bounded N. by Westmeath; E. by Kildare; S. by Queen's County and Tipperary; and W. by Tipperary, Galway, and Roscommon. Area 772 sq. m.; pop. 72,852. The surface in the S. is hilly, and comprises a small portion of the *Slieve-Bloom Mountains*. *Crogan Hill*, in the N.E., has an elevation of 769 feet; but elsewhere the county is comparatively flat and boggy. The *Bog of Allen* covers a large portion of the centre, and extends from E. to W. the whole length of the county. The principal streams are the *Shannon*, *Brosna*, *Barrow*, and *Boyne*. The *Grand Canal* traverses the county from *Edenderry* in the E. to *Shannon Harbour* in the W. Much attention is paid to the rearing of live stock; the manufactures are unimportant, and only for home use. The chief town is *Tullamore*, the principal shipping station on the Grand Canal. King's County was so called by Queen Mary of England in honour of her husband, Philip II. of Spain, whose name is also commemorated in *Philipstown*, on the Grand Canal.

Kings'court, a small town in Cavan. Pop. 932.

Kings'town, a town in the county of Dublin, with a fine harbour.—Mail steam-packets sail daily to and from Liverpool, and to and from Holyhead. Pop. 18,586.—53, 18 N. 6, 8 W.

Kinsale', a seaport in Cork, on a fine bay at the mouth of the Bandon. Pop. 5998.—51, 42 N. 8, 30 W.

Lag'an, a river in Down, which falls into Belfast Lough.

Lanesborough, *lans'bur-o*, a village in Longford, pleasantly situated on the Shannon. Pop. 272.

Larne, a seaport in Antrim, on Lough Larne. Pop. 3995.

Lee, a river which issues from a lake in the county of Cork, flows eastward, and, passing the city of Cork, falls into the harbour.

Leigh'lin Bridge, a flourishing town in Carlow, on the Barrow, with the romantic ruins of an ancient castle. Pop. 835.

Leinster, *lin'ster*, an extensive province in the S.E. It was the earliest settled by the English, contains Dublin, the capital, and is in general well cultivated. Pop. 1,278,989.

Leitrim, *le'trim* (gray ridge), a maritime county of Ireland, encompassed by Donegal, Fermanagh, Cavan, Longford, Roscommon, and Sligo. Area 613 sq. m.; pop. 90,372. The greater part of the surface is wild and rugged. The chief rivers are the *Shannon*, which forms the W. boundary of the county, and the *Bonnet*, the *Blackwater*, and the *Dale*. The large lakes are *Lough Allen*, *Lough Macnean*, and *Lough Melvin*. Iron, lead, and coal are abundant, and copper, manganese, fuller's earth, and potter's clay are also found. There are few manufactures. Agriculture and grazing receive attention, but the farms are small, the soil poor and wet.

Leitrim, a small town in the above county, on the Shannon.

Letterken'ny, a town in Donegal, on the Swilly, with a good trade in linen. Pop. 2188.

Lif'fey (from *lif* or *lliv*, a flood or inundation), a river which rises among the Wicklow Mountains, and flows through Kildare and Dublin into Dublin harbour. So numerous are its windings, that although the distance from its source to its mouth is only 10 miles in a straight line, its actual course is 71.

Lif'ford, the county town of Donegal, on the Foyle, opposite Strabane. Pop. 511.

Lim'erick, a county in Munster, encompassed by the Shannon (separating it from Clare), Tipperary, Cork, and Kerry. Area 1061 sq. m.; pop. 180,632. The surface is an undulating plain, watered by the *Maigue, Deel, Mulcair*, etc., and rising into mountains in the N.E., S., and S.W. The river Shannon forms the N. boundary. The eastern half of the county, called the *Golden Valley*, is the most fertile tract in Ireland. There are numerous dairy farms and extensive pasture lands, on which vast numbers of sheep and cattle are fed. Large quantities of corn, butter, and other produce are exported.

Lim'erick, the capital of the county of Limerick, on the Shannon, a flourishing city, with an extensive trade, and considerable manufactures of lace, linen, woollen, and paper. It sustained a famous siege by the forces of King William III. in 1690 and 1691. Pop. 48,670.

Lis'burn, a fine town in Antrim, on the Lagan, with considerable manufactures. Pop. 10,755.

Lismore', a town in Waterford, on the Blackwater, with a castle, in which the celebrated Robert Boyle was born. Pop. 1860.

Listowel, *lis-to'el*, a town in Kerry, on the Feale; its ancient castle is now in ruins. Pop. 2965.

Londonder'ry, or **Der'ry** (so called because the county was granted by a charter in the reign of James I. to the merchants of London after forfeiture by the rebellion of its native chiefs. Its original name was *Doire-Chalgaich*, the derry or oak-wood of Galgacus), a maritime county in the N. of Ulster, bounded on the E. by Antrim; on the S. by Tyrone; and on the W. by Donegal; its N. boundary being Lough Foyle and the Atlantic Ocean. Area 810 sq. m.; pop. 164,991. The surface is hilly and rugged, with fertile tracts along the rivers. The most important rivers are the *Foyle*, which traverses the N.W., and the *Bann*, which separates Londonderry from Antrim. The staple manufacture is linen. Poultry are extensively reared, and eggs are exported on a large scale.

Londonder'ry, or **Der'ry,** the capital of the above county, a city of great antiquity, pleasantly situated on the Foyle. It sustained a memorable siege against the whole Irish forces under James II., from December 1688 to August 1689. Pop. 29,162.—54, 59 N. 7, 20 W.

Long'ford, a county in the N.W. of Leinster, encompassed by Leitrim, Cavan, Westmeath, Lough Ree, and Roscommon. Area 420 sq. m.; pop. 61,009. Between the N.W. and the centre of the county the surface is diversified by low hills; elsewhere it is mostly flat and boggy. The river *Shannon, Lough Ree, Lough Gowna*, and other lakes border on the county, which is crossed by the *Royal Canal*. Grazing and the rearing of cattle and sheep, and dairy-farming, are the principal pursuits.

Long'ford, the county town of Longford, on the Camlin. Pop. 4380.

Loop Head, a promontory in the S.W. of Clare.—52, 34 N. 9, 57 W.

Loughrea', a well-built town in Galway. Pop. 3159.

Louth, a small maritime county in the N.E. of Leinster, bounded N. by

Armagh and Carlingford Lough; E. by the Irish Sea; S. by the Boyne, separating it from Meath; and on the W. by Meath and Monaghan. Area 315 sq. m.; pop. 77,684. The N. part of the county forms the peninsula of *Carlingford*, which is mountainous, rising to the height of 1935 feet. Between that and *Clogher Head* in the S. the surface is flat or undulating. The principal rivers are the *Boyne*, *Dee*, *Glyde*, and *Fane*. The most important inlets are *Dundalk Bay* and *Drogheda Bay*. Louth is chiefly an agricultural county, but some linen is manufactured, and fishing is an important branch of local industry.

Louth, an ancient town, giving name to the county; it is now reduced to a village. Pop. 261.

Lur'gan, a pleasant town in Armagh, with extensive linen manufactures. Pop. 10,135.

Macgillicuddy Reeks, a mountain range in Kerry, the highest in Ireland, rising from the W. shore of the Lake of Killarney to the height of 3414 feet above the sea. The *Reeks* are so called from their sharp, jagged peaks, the appellation *Macgillicuddy* being added from an old family of that name in the neighbourhood.

Macroom', a town in the county of Cork, surrounded by picturesque scenery, with some romantic ruins. Pop. 3099.

Mal'in Head, a cape in Donegal, the most northerly point of land in Ireland.—55, 23 N. 7, 24 W.

Mal'low, a town in the county of Cork, on the Blackwater. Pop. 4439.

Man'gerton, a hill in Kerry, near Killarney Lakes, 2756 feet high.

Man'or-Hamilton, a pleasant town in Leitrim, with the ruins of an ancient castle. Pop. 1225.

Ma'ryborough, the capital of Queen's County. Pop. 2872.

Mask, a considerable lake in Mayo, on the borders of Galway.

Maynooth', a town in Kildare, where a college for the education of the Roman Catholic clergy was established by the Irish Parliament in 1795. Pop. 1278.

May'o (the plain of the yew trees), an extensive maritime county in Connaught, bounded N. and W. by the Atlantic Ocean, and on the landward sides by Sligo, Roscommon, and Galway. Area 2131 sq. m.; pop. 245,212. The county has about 250 miles of coast-line, deeply indented by numerous bays, the chief of which are *Clew Bay*, *Blacksod Bay*, *Broad Haven*, and *Killala Bay*. Off the coast are the islands *Achil*, *Clare*, *Innisboffin*, and a number of islets. The surface is of a very varied character, presenting both much mountain and waste, and much level and fertile land. The principal mountain summits are *Mweelrea* 2688 feet, *Nephin* 2646 feet, and *Croagh Patrick* 2370 feet; on the top of the last is a chapel dedicated to St Patrick. The *Moy* is the chief river. *Corrib*, *Mask*, *Conn*, and *Carra* are the principal lakes. Iron-ore abounds, but remains unwrought for want of fuel. There are several valuable slate-quarries. Agriculture and fishing afford employment to the majority of the population.

Meath, *meeth*, a county in the E. of Leinster, bounded on the E. by Dublin and the Irish Sea, and having on its other sides Kildare, Westmeath, Cavan, Monaghan, and Louth. Area 906 sq. m.; pop. 87,469. The surface, though not mountainous, is diversified in contour, and in some districts presents picturesque scenery. The county forms the eastern portion of the great central limestone field of Ireland, in which is also a little coal. Paving stones and slate are quarried, and there are traces of copper and iron. The soil is rich and fertile. The principal rivers are the *Boyne* and the *Blackwater*. The Boyne gives name to the battle in which William the Third crushed the pretensions of the Stuarts in Ireland. The *Royal Canal* also passes through the county. Some coarse linens are manufactured, but agriculture is the chief occupation, and grazing occupies considerable attention.

Mid'dleton, a town in the county of Cork, on the estuary of the Lee, with a considerable export trade. Pop. 3358.

Mit'chelstown, a town in the county of Cork, situated on the river Funcheon. Pop. 2467.

Miz'zen Head, a cape in Cork, the extreme S.W. point in Ireland.—51, 27 N. 9, 50 W.

Monaghan, *mon'a-han* (a place full of little hills or brakes), a county in the S. of Ulster, surrounded by Tyrone, Armagh, Louth, Meath, Cavan, and Fermanagh. Area 500 sq. m.; pop. 102,748. In the N.W. and to the E. the country is mountainous, the loftiest point of the *Slieve-Beagh* range being 1254 feet above the sea. Lakes and

rivers are numerous, but small, and the *Ulster Canal* traverses the county. The occupations of the people are almost wholly agricultural.

Mon'aghan, the county town of Monaghan. Pop. 3369.

Mountmel'lick, a town in Queen's County, chiefly inhabited by Quakers. Pop. 3216.

Mountrath', a town in Queen's County, on the Nore. Pop. 1865.

Mourne, a river in Tyrone, which joins the Foyle at Lifford.

Mourne Mountains, a range of hills in Down, of which Slieve-Donnard is 2796 feet above the sea.

Mo'ville, a market town of Donegal, on Loch Foyle. Pop. 1129.

Mullingar', the county town of Westmeath, a great mart for wool. Pop. 4787.

Mun'ster, a province occupying the S.W. of Ireland, and containing the cities of Cork and Limerick. Pop. 1,331,115.

Naas, *nace* (a fair or meeting-place), the county town of Kildare, on a branch of the Grand Canal. Pop. 3808.—53, 13 N. 6, 40 W.

Nav'an, a town in Meath, on the Boyne. Pop. 3873.

Neagh, *ne'ah*, **Lough**, remarkable for its petrifying quality, is a large lake in Ulster, surrounded by the counties of Antrim, Down, Armagh, Tyrone, and Londonderry. It is about 20 miles long, 12 broad, and covers 100,000 acres.

Nenagh, *ne'nah*, a town in Tipperary, on a stream of the same name; has a considerable trade. Pop. 5422.

Neph'in, a mountain in Mayo, 2639 feet above the sea.

New'bridge, a town in Kildare, containing a large cavalry barrack. Pop. 5585.

Newcastle, *new-cas'l*, a town in the county of Limerick. Pop. 2186.

New Ross, a town in Wexford, on a navigable stream formed by the Nore and Barrow. Pop. 6670.

New'ry, a seaport and manufacturing town in Down, on the Newry. Pop. 14,808.

Newtownards', a town in Down, at the head of Strangford Bay, with a diaper manufacture. Pop. 8676.

New'townlimavad'y, a town in the county of Londonderry, on the Roe. Pop. 2954.

New'town-Stew'art, a small town in Tyrone, on the Moyle. Pop. 1079.

Nore, a river which rises in Slieve-Bloom Mountains, passes Kilkenny, and falls into the Barrow.

Omagh, *o-ma'*, the county town of Tyrone. Pop. 4126.

Par'sonstown, or **Birr**, a town in King's County, on a tributary of the Shannon. Pop. 4955.

Pas'sage, a town in the county of Cork, between Queenstown and the city of Cork. Pop. 2440.

Pem'broke, a township in the county of Dublin. Pop. 23,222.

Phil'ipstown (named in honour of Philip II. of Spain), a town in King's County. Pop. 829.

Portadown', a little town in Armagh. Pop. 7850.

Portafer'ry, a town in Down, on Strangford Bay. Pop. 1647.

Portar'lington, a town in Queen's County, on the Barrow. Pop. 2157.

Portrush', a seaport in Antrim, to the N. of Coleraine; it is much resorted to for bathing. An electric railway connects Portrush with the Giants' Causeway. Pop. 1322.

Portum'na, a town in Galway, on the Shannon. Pop. 1252.

Queen's County, an inland county in Leinster, named in honour of Queen Mary I. of England, wife of King Philip of Spain. It is encompassed by Kildare, Carlow, Kilkenny, Tipperary, and King's County. Area 664 sq. m.; pop. 73,124. The surface is generally flat, rising in the N.W. into the *Slieve-Bloom Mountains*, of which the highest summit, *Arderin*, is 1734 feet above sea-level. The soil is fertile, interspersed with large tracts of bog. The chief rivers are the *Barrow*, which has its source in the N.W. uplands, and the *Nore*. The county is intersected by the *Grand Canal*. The minerals embrace coal, iron, copper, manganese, marl, and fuller's earth. There are manufactures of woollen and cotton fabrics, but the industrial pursuits are mostly those connected with agriculture, dairy produce, and the rearing of cattle.

Queens'town, formerly **Cove**, a town in Great Island, in Cork harbour, with magnificent quays and other conveniences for shipping. Pop. 9755.—51, 51 N, 8, 18 W.

Rath'drum, a market in Wicklow, on the Avonmore. Pop. 733.

Rathfri'land, a town in Down, situated on an eminence, with large linen markets. Pop. 1572.

Rathkeale', a town in Limerick, on the Deel, once fortified and defended by a castle. Pop. 2519.

Rath'lin, an island on the N. of Antrim, six miles long and scarcely one broad. Pop. 361.—55, 20 N. 6, 13 W.

Rath'mines and **Rath'gar**, a suburb of Dublin, 1½ miles S. of Dublin Castle. Pop. 24,370.

Ree, a lake formed by the Shannon below Lanesborough, in which are some beautiful islands.

Roscom'mon, an inland county in the E. of Connaught, surrounded by Sligo, Leitrim, Longford, Westmeath, King's County, Galway, and Mayo. Area 949 sq. m.; pop. 132,490. The surface is mostly undulating, but mountainous in the N., where are the *Curlew Mountains*, and flat in the E. The soil is generally fertile, producing those fine pastures for which the county has so long been celebrated. Wheat is raised, but oats and potatoes are the principal crops. The *Shannon* (with its loughs, *Boffin*, *Bodarigg*, and *Ree*) forms part of the E., and the *Suck* the W. boundary. *Lough Key* is in the N. and *Lough Gara* in the W. of the county. The pursuits are chiefly agricultural, but tillage is in a backward state, and the poorer classes of the inhabitants are very wretched. Coal and iron are worked in the N., where there is a considerable coal-field, and extensive smelting and casting operations are carried on. The linen manufacture, once extensive throughout the county, is now almost extinct.

Roscom'mon, the county town of Roscommon. Pop. 2117.

Roscrea', a town in Tipperary. Pop. 2801.

Shan'non (abbreviation of Irish *shean-amhan*, the old river), the principal river of Ireland, issues from Lough Allen in Leitrim, passes through Loughs Boffin, Ree, and Derg; separates Roscommon from Leitrim, Longford, Westmeath, and King's County; Galway and Clare from Tipperary, Limerick, and Kerry; and falls into the Atlantic after a course of 254 miles.

Sker'ries, a small seaport in the county of Dublin, opposite the rocks called the Skerry Islands. Pop. 2227.

Skibbereen', a town in the county of Cork, on the Ilen, with considerable linen manufactures. Pop. 3631.

Sla'ney (the full water), a river which rises in the Wicklow Mountains, and falls into Wexford harbour.

Slieve-Bloom, a ridge of mountains in King's and Queen's Counties, 2265 feet high.

Sli'go, a county in Connaught, bounded on the N. by the Atlantic Ocean; E. by Leitrim; S. by Roscommon and Mayo; and W. by Mayo. Area 721 sq. m.; pop. 111,578. The surface is greatly diversified, mountains and bogs being interspersed with lakes and level tracts of fertile land. In the N.E. is *Truskmore*, the most elevated summit, which is 2113 feet above the sea. The coast is indented by *Sligo* and *Killala Bays*; and near it are the islets of *Innismurry*, *Oyster*, and *Coney*. The principal rivers in Sligo are the *Arrow* and *Moy*, the latter of which forms the W. boundary. The loughs embrace *Gill*, *Arrow*, *Gara*, *Talt*, and *Easky*. The occupations are chiefly agricultural. Coarse woollens and linens are manufactured for home use.

Sli'go, a flourishing seaport, and the capital of the above county, situated on Sligo Bay. Pop. 10,808.—54, 17 N. 8, 25 W.

Slyne Head, a cape on the W. of Galway.—53, 24 N. 10, 16 W.

Strabane', a town in Tyrone, near the confluence of the Finn and the Mourne. Pop. 4196.

Strang'ford, an ancient town in Down, near the entrance of the bay to which it gives name. Pop. 434.

Strang'ford, a beautiful bay in Down, 16 miles long and 3 broad.

Suir, *shoor*, a river which rises in Tipperary, and falls into Waterford harbour.

Swil'ly, Lough, a bay in Donegal, affording one of the noblest harbours in Europe, nearly 25 miles long and 2 broad.

Tal'low, a town in Waterford, on the Bride. Pop. 1232.

Tanderagee', a finely situated town in Armagh, in the centre of the linen manufacture. Pop. 1587.—54, 22 N. 6, 15 W.

Templemore', a town in Tipperary, beautifully situated near the Suir, in a highly fertile district. Pop. 2800. —52, 48 N. 7, 49 W.

Thom'astown, a town in Kilkenny, on the Nore. Pop. 1067.

Thurles, *thurls*, a town in Tipperary, divided by the Suir. Pop. 4850.

Tippera'ry, an inland county in the N.E. of Munster, bounded by King's County, Queen's County, Kilkenny, Waterford, Cork, Limerick, Clare, and Galway. Area 1659 sq. m.; pop. 199,612. The surface generally is level, but there are groups of mountains in the E., S., and W. Of these

there are in the S. the *Galtees*, rising to the height of 3018 feet; *Knockmeledown*, 2700 feet; and *Slieve-Naman*, 2364 feet; in the W. is the group of which *Keeper Mountain*, 2278 feet, is the principal; and in the E. are the *Slievear-dagh Hills*. In the N. is a curious isolated height called the *Devil's Bit*, 1583 feet in elevation, which is associated with many popular legends. In the level country the soil is of extraordinary fertility, especially in the tract known as the *Golden Vale*, extending from Limerick to the confines of Kilkenny county. The river *Suir* rises in the Devil's Bit, near *Templemore*, and, for the greater part of its course, runs through the county; the *Shannon* forms part of the W. boundary. The mineral products embrace coal of the nature of anthracite, found on the eastern border and thence to within a few miles of Cashel, copper found at Hollyford, and zinc and lead mixed with silver at Silvermines and Shallee.

Tippera'ry, a town in the county of Tipperary. Pop. 7274.

Tralee', the county town of Kerry, near the head of Tralee Bay. Pop. 9396.—52, 15 N. 9, 43 W.

Tramore', a town in the county of Waterford, on a fine bay. Pop. 2036.

Trim, the county town of Meath, on the Boyne. Pop. 1586.

Tu'am, a town in Galway, with considerable trade and manufactures. Pop. 3567.

Tullamore' (the great hill), a municipal borough, the capital of King's County. Pop. 5098.

Tul'low, a town in Carlow, on the Slaney. Pop. 1977.

Tuskar Rock, a dangerous rock on the coast of Wexford, with a lighthouse.—52, 12 N. 6, 13 W.

Tyrone', an inland county in the province of Ulster, bounded N. by Londonderry; E. by Lough Neagh and Armagh; S. by Monaghan and Fermanagh; and W. by Fermanagh and Donegal. Area 1260 sq. m.; pop. 196,719. The surface is for the most part hilly, rising into mountains on the N. and S. *Slieve-Sawel*, on the Londonderry border, is 2240 feet above the level of the sea. The soil in the low-lying districts towards the E. is fertile and watered by numerous branches of the *Foyle* and *Blackwater* rivers. Much of the central district is reclaimed moor or bog, but a great deal may yet be done towards improvement by judicious draining. Oats, potatoes, and flax are the principal crops. Coal is mined near *Dungannon* and at a populous village called *Coal Island*. Marble is quarried in the neighbourhood of Monaghan, potter's clay about Coal Island, and in the uplands indications of lead, copper, and iron are frequent. The leading branch of industry is agriculture, but the manufacture of linens, coarse woollens, and other useful commodities employs a large portion of the inhabitants.

Ul'ster, an extensive province in the N. of Ireland, and the chief seat of the linen manufacture. It has been in a great measure peopled by emigrants from Scotland, who are Presbyterians. Pop. 1,743,075.

Ur'ris or **Er'ris Head**, a cape on the N.W. coast of Mayo.—54, 16 N. 9, 58 W.

Valen'tia, an island off the coast of Kerry, 7 miles long and 2 broad.—51, 55 N. 10, 23 W.

Wat'erford, a maritime county in the S.E. of Munster, bounded S. by the Atlantic Ocean; W. by Cork; N. by Tipperary and Kilkenny; and E. by Waterford Harbour, separating it from Wexford. Area 721 sq. m.; pop. 112,768. Most of the surface is mountainous, the principal ranges being *Knockmeledown*, *Cummeragh*, *Monevolagh*, and *Drum*; but there is much undulating and level land along the banks of the *Suir*, the *Blackwater*, and the *Bride*, as well as skirting the coast, which is indented by several inlets, of which the principal are *Waterford Harbour*, *Tramore Bay*, *Dungarvon Harbour*, and *Ardmore Bay*. Copper and marble are the principal minerals worked; the former is found at *Knockmahon*, and the latter near *Whitechurch* and *Cappoquin*. The occupations of the population are chiefly those connected with pasturage and dairy-farming. Waterford being the principal dairy county in Ireland, large quantities of butter and bacon are exported.

Wat'erford, the capital of the county, and a flourishing seaport, with an excellent harbour. Pop. 29,181.—52, 16 N. 7, 7 W.

Westmeath, *west'meeth*, an inland county in Leinster, bounded by Longford, Meath, Kildare, King's County, Roscommon, and Lough Ree. Area 708 sq. m.; pop. 71,978. The surface is picturesquely diversified with hill, valley, and lake, but there are no mountains, the greatest elevation being only 849 feet. The soil is fer-

tile, interspersed with bog. The county is well watered. In the W. is the river *Shannon;* the *Inny* flows through the N. and the *Brosna* through the centre. Connected with these rivers are Loughs *Ree, Dereveragh, Ennel, Owel, Lane, Iron,* and *Sheelin.* The *Royal Canal* intersects the county, and a branch of the *Grand Canal* proceeds to *Kilbeggan.* The occupations are wholly connected with agriculture, grazing and dairy-farming being the chief.

West'port, a well-built seaport in Mayo, on Clew Bay. Pop. 4469.—53, 48 N. 9, 29 W.

Wex'ford, a maritime county in the S. of Leinster, bounded on the E. and S. by St George's Channel and the Atlantic Ocean, and on the landward sides by Kilkenny, Carlow, and Wicklow. Area 900 sq. m.; pop. 123,854. The E. coast is dangerous from sandbanks. The S. shores are skirted by several lagoons, and off the coast are some small islands. The surface of the county is hilly, rising in the N.W. into the ridge of *Mount Leinster* and *Blackstairs,* and declining to a level peninsula in the S.E. The river *Slaney,* navigable for barges to *Enniscorthy,* passes through the county, and the *Barrow* skirts it on the W. Grazing and dairy-farming are leading pursuits. Manufactures are unimportant, but fishing is general along the coast.

Wex'ford, the county town of Wexford, at the mouth of the Slaney. Near this the handful of Anglo-Normans, who began the conquest of Ireland, landed in 1169. Pop. 12,163.—52, 20 N. 6, 27 W.

Wicklow, *wik'lo,* a maritime county in Leinster, bounded on the E. by the Irish Sea, and on the landward sides by Wexford, Carlow, Kildare, and Dublin. Area 781 sq. m.; pop. 70,386. Wicklow is the most picturesque county in Ireland, the surface being beautifully diversified with mountain, valley, stream, and lake. The central portion is quite a maze of mountains, the chief of which are *Lugnaquilla,* 3039 feet; *Tonelagee,* 2683 feet; and *Duff Hill,* 2264 feet. The vale of *Avoca,* at the mouth of which *Arklow* stands, is that celebrated by the poet Moore in his "Meeting of the Waters." Near to *Rathdrum* is the mountain valley of *Glendalough,* famous for its scenery, for the ruins of the "Seven churches," with St Kevin's kitchen, a round tower, and a lake, called the *Lake of Serpents,* because St Patrick is said to have drowned in it all the serpents that were once in Ireland. The principal rivers are the *Liffey* and the *Slaney* in the W., and the *Avoca* and the *Vartry* in the E., all of which rise in the county. The principal minerals are pyrites and copper and lead ores, but silver, iron, zinc, tin, and some others are also found. Except in the *Avoca* district, where important mining operations are carried on, and at *Arklow,* where there is a good fishery, the pursuits of the people are chiefly agricultural.

Wick'low, a seaport, and the county town of Wicklow. Pop. 3391. About two miles distant is Wicklow Head, with two lighthouses.—52, 58 N. 6, 1 W.

Youghal, *yaw'hal,* a seaport in Cork, at the mouth of the Blackwater. Pop. 5396.—51, 57 N. 7, 49 W.

SWEDEN AND NORWAY.

The Kingdoms of Sweden and Norway, united under one sovereign since 1814, embrace between them the entire north-western peninsula of Europe, sometimes called Scandinavia. They extend from 55° 20′ to 71° 11′ N. lat., and from 5° to 31° E. long., being together about 1150 miles in length, and from 200 to 450 miles in breadth. In both Sweden and Norway, the monarchy is limited by two legislative chambers, called in Sweden the Diet, in Norway the Storthing; but the popular checks on kingly power are stronger in Norway than in Sweden. The union between Sweden and Norway is merely of

the crowns; not only the legislature of Norway, but her law-courts and finances, and even her army and navy, are distinct from those of Sweden. In both, the population is Teutonic, with the exception of a few Lapps and Finns, kindred races of the Mongolian stock, in the extreme north, and almost all, Lapps and Finns included, belong to the Lutheran Church under the episcopal form. In both, the spoken dialects are akin to Danish, and in both, elementary instruction is universal. The climate of both is alike in this, that it knows only two seasons, summer and winter, the transition from the one to the other being completed in a few days. The shortness of the warm season in summer is compensated by the length of the day; for, even in the southern provinces, the sun is scarcely five hours below the horizon; while, in the higher latitudes, there are weeks during which it does not set. Vegetation is accordingly so rapid, that within three months the corn is sown, ripens, and is reaped. In winter, again, the day is proportionally short; and, in the northern regions, there is an uninterrupted night of several weeks' duration, relieved only by moonlight reflected from the snow, and by the aurora borealis, which in those high latitudes is peculiarly brilliant. In both countries, pine-forests abound, covering one-fifth of the surface in Norway, and nearly one-half of it in Sweden. Accordingly, except in the larger towns, the houses are generally of wood. In both countries, also, the great majority of the population is engaged in farming, the land being held by small proprietors. Wheat succeeds only in favoured spots; oats and potatoes are the main crops, barley and rye coming next; flax and hops are subsidiary.

SWEDEN

Is bounded N. by Finmark; W. by Norway and the Cattegat; S. by the Baltic; E. by the Baltic, the Gulf of Bothnia, and Russia. It contains 168,042 square miles, and a population of 4,638,000.

Divisions.	Chief Towns.
Sweden Proper (or Svealand)—	
Stockholm	STOCKHOLM, Sigtuna, Oregrund.
Upsala	Upsala.
Westmanland	Westeras, Sala.

Divisions.	Chief Towns.
Sodermanland	Nykoping, Tunaberg.
Orebro	Orebro.
Wermland	Carlstad.
Kopparberg	Fahlun, Hedemora, Elfvedal.
Gothland—	
Oestergothland	Linkoping, Norrkoping, Soderkoping.
Calmar	Calmar, Westervick, Borgholm.
Jonkoping	Jonkoping.
Kronoberg	Wexio.
Blekinge	Carlscrona.
Skaraborg	Mariestad, Skara.
Elfsborg	Wenersborg.
Gottenburg and Bohus	Gottenburg, Uddevalla.
Halland	Halmstad.
Christianstad	Christianstad.
Malmohus	Malmo, Lund, Helsingborg, Landscrona.
Gothland	Wisby.
Norrland—	
Norrbotten or North Bothnia	Pitea, Lulea.
Westerbotten or W. Bothnia	Umea, Tornea.
Wester Norrland	Hernosand.
Jaemtland	Ostersund.
Gefleborg	Gefle, Soderhamn, Hudiksvall.

Islands.—Gothland, Oland.

Lakes.—Wener, Wetter, Mælar, Hielmar.

Rivers.—Klar and Gotha, Dahl, Angermann, Pitea, Lulea, Tornea.

REMARKS.

The coast of Sweden is low and little indented, the western portion being rocky, and the eastern side sandy, especially along the Gulf of Bothnia. At the upper end of this gulf, what with sand brought down by the rivers, and a gradual elevation of the surface from some unknown cause, at the rate of 3 feet in a century, the dry land is gaining on the sea. Small islands are numerous along the whole coast. The interior rises very gradually towards the Norwegian frontier, and is of a lowland character generally, especially towards the south. The highest mountain entirely within Sweden is Areskutan, in lat. 63°, 4810 feet. The rivers, abounding in fish, are of little use for navigation because of rocks and cataracts. Most remarkable are the lakes which succeed each other across southern Sweden—Wener, the largest, fed by the river Klar, and discharging into the Cattegat by the river Gotha; Wetter, more picturesque; and Mælar, studded with islands. On the outlet of Lake Mælar into the Baltic stands the capital of Sweden, STOCKHOLM, built partly on the mainland, partly on nine islands, on which account it has been called the Venice of the North. Having a good harbour, it is the commercial as well as the political capital of the country. Some quarters of it remain

antiquated, lofty houses overhanging narrow and crooked streets, and others wear a semi-rustic aspect; but the principal streets are regular and spacious, and numerous statues ornament its squares, while parks and pleasure-grounds make its environs attractive. Most of the 300 islands of Lake Mælar are inhabited, its banks are adorned with handsome mansions, and its views have been compared to those of the Lago Maggiore. A railway connects Lake Mælar with Lake Wener; and, with the aid of Lakes Wener and Wetter, the Gotha Canal connects the Baltic with the Cattegat.

The year 1819 began a period of systematic improvement in farming methods; and many districts, especially in the south, now vie with the best cultivated parts of England. Iron-ore abounds, and that of the finest quality. The most celebrated mines of it are at Dannemora, in the Upsala district; but the largest quantity is in Lapland, where it forms the mountain of Gellivara, 1750 feet high, unworked as yet for want of fuel. The chief exports are timber, iron, and oats; the chief imports, manufactured articles, colonial produce, coal, and salt.

NORWAY

Is bounded N. by the Arctic Ocean; W. by the Arctic and Atlantic Oceans; S. by the Skager Rack; E. by Sweden. It contains 121,807 square miles, and a population of about 1,842,000.

Divisions.	Chief Towns.
Christiania—	
Aggershuus	CHRISTIANIA, Drobak.
Smaalehnen	Moss, Frederickshald, Frederickstad.
Buskerud	Drammen, Kongsberg.
Jarlsberg and Laurvig	Tonsberg, Laurvig.
Hamar—	
Christians	Lessoe.
Hedemarken	Hamar, Kongsvinger.
Christiansand—	
Bradsberg	Skien, Porsgrund.
Nedenaes	Arendal.
Lister and Mandal	Christiansand, Mandal.
Stavanger	Stavanger.
Bergen—	
N. and S. Bergenhuus	Bergen, Rosendal.
Drontheim or *Trondheim—*	
Romsdal	Christiansund.
N. and S. Drontheim	Drontheim, Roraas.
Tromsoe—	
Nordland	Alstahoug.
Tromsoe	Tromsoe.
Finmark or Norwegian Lapland	Altengaard, Hammerfest.

Islands.—Hitteren, Vigten Isles, Lofoden Isles, Mageroe.
Bays.—Christiania, Hardanger, Drontheim, West Fiord.
Capes.—North Cape, the Naze or Lindesnæs.
Mountains.—Dovrèfield, Langèfield, Kiolen.
Lakes.—Miosen, Rands, Tyri, Faemund.
Rivers.—Glommen, Baegna, Laagen, Drammen.

REMARKS.

Three features mark the coast of Norway—precipitous cliffs, narrow and deep inlets called *fiords*, and innumerable islands. Of these last, the largest group is the Lofoden, between two of the southernmost of which is the famous *Maelstrom*, a much exaggerated whirlpool. The *fiords* are the inland waterways of Norway, the rivers being useless for navigation, however attractive to the sportsman. Towards the north especially, the rocks on the coast of Norway are so huge, lofty, and in shape so strange, that, with the added contrast between snow and glacier above and bright verdure below, they attract an annually increasing number of summer tourists. At the head of almost every *fiord* is a waterfall; and the finest permanent waterfall in Europe is said to be Vöring Fos, at the head of Eid Fiord. The river Glommen in the south has been matched with the Rhine, and Alpine scenery abounds in the long narrow valleys which run into the interior. But the interest ceases altogether on reaching the highest elevation: one featureless table-land, called *fjeld*, seems to extend in all directions to the horizon; for the eye does not distinguish the deep ravines that really separate *fjeld* from *fjeld*. The only mountains forming anything like a continuous chain are the Kiolen, which run from the latitude of Drontheim to 70°. These mountains are the home of the *lemming*, a species of rat, which at times descends towards the coast in immense swarms, devouring every production of the soil. The highest summits lie south of the Kiolen chain, the highest of all being Galdhöppigen, 8544 feet, in Jotun Fjeld, south of 62°. Though only about half the height of the Alps, the Norwegian mountains are yet, because of their higher latitude, far more extensively covered with eternal snow and ice. The largest perpetually frozen mass in Europe, measuring nearly 100 miles in length, lies west of Jotun Fjeld.

Not one-hundredth part of the surface of Norway is under the plough. The fisheries employ a large population; and the Norwegians have a large share in the carrying trade of the world, their mercantile navy being second in extent only to the British. Both fishing and navigation are favoured by the comparative mildness of winter along the strictly western coast. The temperature is equalized throughout the year by the immense Atlantic, and in winter is maintained by the Gulf Stream to such a degree that, whereas the Baltic in the latitude of Bergen is almost every winter bridged

over with ice, the harbour of Bergen itself is seldom frozen. The southern coast of Norway, not being washed by the Gulf Stream, suffers from the same rigorous winter as the whole of Sweden; hence the paradox, that winter is severer in the extreme south of Norway than in the extreme north. The chief exports are the produce of the forests and fisheries: lucifer matches, which may be regarded as forest-produce, and eider-down, which may be regarded as fishery-produce, form considerable items. The chief imports are grain, colonial produce, and manufactured articles. At least one-third of these imports are entered at CHRISTIANIA, the capital of Norway, grandly and characteristically situated at the head of a *fiord* 60 miles long, and studded with islands. Christiania possesses a university founded by voluntary subscriptions in 1811.

EXERCISES.

Since when have Sweden and Norway been under one sovereign? What one name is sometimes given to the whole peninsula? Between what degrees of latitude and longitude is the peninsula situated? State its length and average breadth. How are the Swedish and Norwegian parliaments named respectively? Mention four points in which England and Scotland are united, but Sweden and Norway separate. To what race and church does the population belong? What about the Lapps and Finns? Describe the climate of the peninsula. In which country do forests abound most? What about the houses? What are the principal, and what the subsidiary crops?

How is Sweden bounded? What is its extent in square miles? What is the amount of its population? Name its divisions. Name the towns of Norrland; of Sweden Proper; of Gothland. Where are Christiania, Tyri, Stockholm, Upsala, Pitea, Fahlun, Lofoden Isles, Dovrefield, Dahl, Glommen, Tornea, Kiolen, Nykoping, Hitteren, Oland? etc.

Describe the coast of Sweden. Account for the dry land gaining on the Gulf of Bothnia. Describe the interior of Sweden. Name the highest mountain, and give its height. Name and characterize the three principal Swedish lakes. How do they subserve communication across the country? What is said of the site of Stockholm? Describe its various quarters. What are the Italian parallels to its site, and to the lake on which it stands? Since when did Swedish agriculture take a new start? Where are the most famous iron-mines in Sweden? What about Gellivara? Mention the chief exports and imports of Sweden.

How is Norway bounded? What is its extent in square miles? What population does it contain? What are the divisions of Norway? Name the principal towns of Christiania? Name the towns of Finmark. What are the principal islands of Norway? Name its principal bays. Name its capes. What are its mountains? What are its chief lakes? What are its principal rivers? What three features mark the coast of Norway? Where and what is the *Maelstrom*? Where is the coast-scenery finest, and of what does it consist? What and where is Vöring Fos? What river has been matched with the Rhine? What is a *fjeld*? What are the limits of the Kiolen mountains proper? What of the *lemming*? Name the highest mountain, and give its height. Whereabouts is the most extensive permanent field of snow and ice? Why

cannot this field be matched among the Alps, which are nearly twice as high as the mountains of Norway?

What proportion of the surface of Norway is under the plough? What of the Norwegian carrying trade? How are both navigation and fishing favoured? Point out the effect of the Atlantic in general, and of the Gulf Stream in particular, on the temperature of the Norwegian coast. What part of the coast does not share in this effect? State a fact showing that, in the latitude of Bergen, the rigour of winter increases eastward. Explain why the winter temperature in the extreme north of Norway is higher than in the extreme south. Under what general headings may lucifer-matches and eider-down, as exported articles, be brought respectively? Name the three chief imports. What proportion of these is entered at the capital? Describe the situation of the capital. When and how was its university founded?

DESCRIPTIVE TABLE.

Aggershuus, *ag'gers-hooss,* a bailiwick of Norway, in the province of Christiania. Pop. 116,365.

Al'stahoug, a small town of Norway, capital of the bailiwick of Nordland, province of Tromsoe, on a small island. It is the seat of the most northerly bishopric in Europe. Pop. 500. —65° 54′ N. lat. 12° 40′ E. long.

Al'tengaard, a town in Finmark, at the head of a deep bay. Pop. 2000.—69, 55 N. 23, 8 E.

Aren'dal, a small seaport of Norway, on the S. coast of Christiansand. Pop. 5800.—58, 25 N. 8, 43 E.

Ber'gen, a province and bishop's see in the S.W. of Norway, containing two bailiwicks:—S. Bergenhuus, p. 119,500; N. Bergenhuus, p. 88,100.

Ber'gen, the capital of the above province, one of the most flourishing commercial towns in the kingdom. Pop., including suburbs, 33,830.—60, 24 N. 5, 18 E.

Blekinge, *bla'king,* a maritime *laen* or government of Sweden, in the province of Gothland, with extensive fisheries. Pop. 137,477.

Borg'holm, the only town or landing-place in the island of Oland. P. 773.

Both'nia, an extensive region on both sides of the Gulf of Bothnia. East Bothnia now belongs to Russia; West and North Bothnia to Sweden. See **Pitea** and **Umea.**

Both'nia, Gulf of, a branch of the Baltic, which separates Sweden from Finland.

Brads'berg, a bailiwick of Norway, in the province of Christiansand. Pop. 87,600.

Busk'erud, a bailiwick of Norway, in the province of Christiania. Pop. 105,600.

Cal'mar, a fertile maritime *laen* or government of Sweden, lying along the Baltic coast. Pop. 245,105.

Cal'mar, a seaport and capital of the above government, on the sound to which it gives name. It derives celebrity from the treaty of 1397, by which Queen Margaret united the kingdoms of Norway, Sweden, and Denmark. P. 10,963.—56, 40 N. 16, 20 E.

Carlscro'na, a strong seaport of Sweden, the capital of the government of Blekinge, and the principal station of the Swedish navy. Pop. 18,300.—56, 9 N. 15, 35 E.

Carl'stad, the capital of the government of Wermland, in Sweden, on the N. coast of Lake Wener, near the mouth of the Clara, with considerable trade. Pop. 7772.

Cat'tegat. *See the* Descriptive Table of DENMARK, page 117.

Christia'nia, a province and bishop's see in Norway, divided into four bailiwicks. Pop. 489,915.

Christia'nia, the capital of Norway, and of the above province. Pop. 76,054. —59, 54 N. 10, 50 E. *See* REMARKS, p. 108.

Christ'ians, a bailiwick of Norway, in the province of Hamar. Pop. 115,814.

Christiansand', a province and bishop's see in the south of Norway, now divided into four bailiwicks. Pop. 342,672.

Christiansand', the capital of the above province, at the head of a deep bay. It has a fine Gothic cathedral, and considerable trade. Pop. 11,766. —58, 9 N. 7, 57 E.

Christ'ianstad, a fertile *laen* or government of Sweden. Pop. 230,619.

Christianstad', a fortified town on the Baltic, the capital of the above

government. Pop. 9203.—56, 0 N. 14, 5 E.

Christiansund', a seaport on the W. coast of Norway, in Drontheim, with a fine harbour. Pop. 5709.—63, 5 N. 7, 49 E.

Cla'ra, a river which traverses Lake Fœmund in Norway, and enters Lake Wener at Carlstad.

Dahl, *dal*, a river in Sweden, which rises among the Norwegian mountains, and discharges itself into the Gulf of Bothnia near Gefle.

Dalecar'lia, an ancient province of Sweden, traversed by the river Dahl, now the government of Kopparberg, famed for its rich copper-mines and the bravery of the peasants. Pop. 190,133.

Danemo'ra, a town, or rather a collection of villages, in Sweden Proper, celebrated for its iron-mines.

Dov'rĕfield or **Dof'rines** (the gloomy mountains), the loftiest part of the Norwegian ridge of mountains. Sneehatten, the highest summit, is 7620 feet above the sea-level.

Dram'men, a river in the S. of Norway, by which immense quantities of timber are floated down to Christiania Bay, into the W. side of which it falls.

Dram'men, a seaport of Norway, in the province of Aggershuus, at the mouth of the Drammen, with a great export trade in timber. Pop. 18,851. —59, 39 N. 10, 28 E.

Dro'bak, a seaport of Norway, in the province of Christiania, on Christiania Bay. Pop. 1650.

Dron'theim or **Trond'heim**, a province and bishop's see in the centre of Norway, containing three bailiwicks. Pop. 272,000.

Dron'theim, a seaport and capital of the above province, situated on a fine bay; anciently the residence of the Norwegian kings. In its neighbourhood are rich copper-mines. Pop. 22,597.—63, 25 N. 10, 24 E.

Elfs'borg, a *laen* or government in Sweden, in the province of Gothland. Pop. 288,947.

Elf'vedal, a town of Sweden, in the government of Kopparberg, on the Dahl, where there are valuable quarries of porphyry. Pop. 4100.—61, 15 N. 14, 0 E.

Fæ'mund, a lake in the bailiwick of Hedemarken, near the borders of Sweden.

Fahlun, *fa'loon*, the capital of the *laen* or government of Kopparberg, in Sweden; in its neighbourhood there are rich copper-mines. Pop. 7305.—60, 35 N. 15, 38 E.

Fin'mark, an extensive region of Norway, in Tromsoe, called likewise Norwegian Lapland. Pop. 24,075.

Fred'erickshald, a town in Norway, in the province of Christiania; in besieging Frederickstein, its fortress, Charles XII. of Sweden was killed in 1718. Pop. 9219.—59, 7 N. 11, 21 E.

Fred'erickstad, a fortified town of Norway, province of Christiania, at the mouth of the Glommen. Pop. 6833.

Gef'leborg, a fertile *laen* or government of Sweden, lying along the Gulf of Bothnia. Pop. 178,728.

Gef'le, a seaport, and the capital of the above government, with considerable trade. Pop. 18,758.—60, 39 N. 17, 8 E.

Gelliva'ra, a mountain in the extreme north of Sweden, 1800 feet high, and believed to consist wholly of excellent iron-ore.

Glom'men, the largest river of Norway, rises in the Dovrĕfield Mountains, and falls into the Skager Rack near Frederickstad.

Go'tha, a large river in Sweden, which issues from the S. extremity of Lake Wener, and falls into the Cattegat at Gottenburg.

Go'tha, Canal of, connecting the Baltic with the Cattegat at Gottenburg. By the completion of this canal in 1832, an internal navigation, by means of the lakes Wener, Weter, etc., has been formed from sea to sea.

Goth'land, a large division of Sweden, forming the southern and most fertile portion of the monarchy, now divided into twelve governments.

Goth'land, a large island and government of Sweden, in the Baltic. Pop. 54,668.

Got'tenburg and **Bohus**, a *laen* or government of Sweden, on the coast of the Cattegat, with fisheries and good pasture. Pop. 261,114.

Got'tenburg, a flourishing commercial city, the capital of the above government, on the Cattegat. A great many British merchants reside here. Pop. 78,313.—57, 42 N. 11, 56 E.

Hal'land, a *laen* or government of Sweden, with extensive forests and salmon fisheries. Pop. 135,299.

Halm'stad, a strong seaport, the capital of the above government, on the Cattegat. Pop. 8505.

Ham'ar, a province of Norway, north of Christiania, divided into two bailiwicks. Pop. 236,432.

Ham'merfest, a small town on an island near the northern extremity of Finmark. Pop. 1550.—70, 49 N. 23, 55 E.

Hedemark'en, a bailiwick of Norway, in the province of Hamar. Pop. 124,100.

Hedemo'ra, a small town of Sweden, situated in a fertile part of Kopparberg. Pop. 1160.

Hel'singborg, a seaport of Sweden, in the government of Malmohus, on the Sound, opposite Elsinore in Denmark. Pop. 11,550.—56, 9 N. 12, 44 E.

Her'nosand, a small seaport of Sweden, on the Gulf of Bothnia, the capital of the government of Wester Norrland. Pop. 5370.

Hiel'mar, a lake of Sweden, between lakes Wener and Mælar.

Hit'teren, a considerable island of Norway, on the coast of Drontheim. Pop. 3700.

Hu'diksvall, a town of Sweden, in the government of Gefleborg, on an inlet of the Gulf of Bothnia. Pop. 4464.

Hueen', a small island at the entrance to the Sound, remarkable as having been the residence of Tycho Brahè.

Jaemtland, *yemt'lant*, a mountainous *laen* or government of Sweden, in Norrland. Pop. 83,623.

Jarls'berg and Laur'vig, a bailiwick of Norway, in the province of Christiania. Pop. 91,900.

Jonkop'ing, an interior *laen* or government of Sweden. Pop. 195,787.

Jonkop'ing, the capital of the above government, on the S. bank of Lake Wetter. Pop. 16,147.

Kio'len, the northern part of the great chain of mountains separating Norway from Sweden, the highest of which, Sulitelma, is 6200 feet above the sea.

Kongs'berg (king's mountain), a town of Norway, in Christiania, on the Lauven, celebrated for its silver-mines. Pop. 4800.—59, 39 N. 9, 37 E.

Kongs'vinger, a small town of Norway, in the province of Hamar.

Kop'parberg, a *laen* or government of Sweden, comprehending the ancient province of Dalecarlia. Pop. 190,133.

Kron'oberg, a *laen* or government of Sweden, in the province of Gothland Pop. 169,736.

Landscro'na, a seaport in the government of Malmohus, on the Sound strongly fortified. Pop. 9763.—55, 5 N 12, 48 E.

Lan'gèfield, the southern part of the great Norwegian chain of mountains, from the Naze to the N. of the province of Bergen. Skagstôl-tind, the loftiest summit, is 8101 feet above the sea.

Lap'land, the most northerly country of Europe, extending above 600 miles from the North Cape to the White Sea in Russia. It is divided into Norwegian, Swedish, and Russian Lapland; and although it contains about 130,000 sq. m., the entire pop. does not exceed 60,000.

Laur'vig, a seaport of Norway, in Christiania, on the W. side of Christiania Bay, at the mouth of the Lauven, remarkable for its foundries. Pop. 3400.—59, 5 N. 10, 10 E.

Lau'ven, or Lou'ven, a river of Norway, which rises in the Langèfield Mountains, passes Kongsberg, and falls into the Skager Rack at Laurvig.

Lessoe, *les-so'*, a small town of Norway, in the N. of the province of Hamar.

Lindesnæs. *See* **Naze.**

Linkop'ing, the chief town of the *laen* or government of Oestergothland, in Sweden, in a fertile plain; its cathedral, if that of Upsala be excepted, is the finest in the kingdom. Pop. 8752. —58, 24 N. 15, 49 E.

Lofo'den Isles, a group of islands on the N.W. coast of Norway, the seat of an extensive cod and herring fishery, which employs, in the fishing season, 20,000 men. The group consists of five large and several small islands. Permanent pop. 4000.

Lu'lea, a town of Norrland, in the government of Norrbotten on the Gulf of Bothnia, near the mouth of the Lulea, a river which has a great waterfall, said to be half a mile broad. Pop. 3120.—65, 36 N. 22, 15 E.

Lund, *loond* (a sacred grove), a town in the government of Malmohus, on the Sound, the seat of a university. Pop. 14,304.—55, 42 N. 13, 10 E.

Mæ'lar, a large lake of Sweden, extending from Stockholm 75 miles into the interior, and containing about 13,000 islands.

Mael'strom, a famous whirlpool near the S. extremity of the Lofoden Isles.—67, 47 N. 11, 50 E.

Ma'geroe, a bare and rocky island on the N. coast of Norwegian Lapland, inhabited by four or five families. The North Cape forms its northern extremity.

Mal'mo, a strongly fortified seaport,

the capital of the government of Malmohus, on the Sound, with considerable trade and manufactures. Pop. 38,054. —55, 36 N. 13, 0 E.

Mal'mohus, the most southerly *laen* or government of Sweden, rich in agricultural produce. Pop. 349,310.

Man'dal, with **Lister**, a bailiwick of Norway, in the province of Christiansand. Pop. 75,121.—A town of the same name in the above bailiwick, on a bay near the Naze. Pop. 2850.

Ma'riestad, a town of Sweden, capital of the government of Skaraborg, on the E. shore of Lake Wener. Pop. 2658.—58, 42 N. 13, 50 E.

Mios'en, a lake of Norway, in Christiania, 60 miles long and 15 broad.

Moss, a town of Norway, in the province of Christiania, on Christiania Bay. Pop. 4307.—59, 25 N. 10, 37 E.

Mota'la, a river in Sweden, issuing from Lake Wetter, and falling into the sea below Norrkoping.

Naze (nose, or promontory), a promontory forming the southern extremity of Norway.—57, 58 N. 7, 3 E.

Ned'enaes, a bailiwick of Norway, in the province of Christiansand. Pop. 73,415.

Nord'kyn, a promontory in Finmark, the most northerly point of continental Europe.—71, 8 N. 27, 58 E.

Nord'land, a bailiwick of Norway, in the province of Tromsoe. Pop. 104,151.

Norrbot'ten, the northernmost *laen* or government of Sweden, in Norrland, comprehending North Bothnia. Pop. 91,812.

Norrkop'ing, one of the principal commercial towns of Sweden, in the government of Oestergothland, near the mouth of the Motala. Pop. 26,735. —58, 33 N. 16, 12 E.

Norr'land, a large division of Sweden, including North and West Bothnia, now divided into five *laens* or governments.

North Cape, in the island of Mageroe, the most northerly point of Norwegian Lapland, and of all Europe, excepting the northern extremity of Francis Joseph Land.—71, 10 N. 25, 50 E.

Nykop'ing, a maritime town of Sweden, the capital of the government of Sodermanland, on the Baltic. In its neighbourhood are mines of cobalt. Pop. 4813.—58, 45 N. 17, 1 E.

Oestergoth'land, a fertile agricultural *laen* or government of Sweden. Pop. 267,133.

O'land, an island on the S.E. coast of Sweden, belonging to the government of Calmar; it is 80 miles long, and from 8 to 14 broad, and is separated from the mainland by the Sound of Calmar. Pop. 33,000.

Orebro', an inland *laen* or government of Sweden, with mines of iron, copper, cobalt, etc. Pop. 182,263.

Orebro', the chief town of the above government, near the W. shore of the Lake Hielmar. Pop. 11,785.—59, 17 N. 15, 9 E.

Oregrund, *o'ra-groond*, a small seaport of Sweden, in the government of Stockholm, on the Gulf of Bothnia, Pop. 700.

Ostersund', the chief place in the government of Jaemtland, on the E. shore of Lake Storsion. Pop. 2854.

Pite'a, the chief town in the government of Norrbotten, Sweden, on a river of the same name. Pop. 2337.—65, 20 N. 21, 40 E.

Pite'a, a river in Sweden, governments of Westerbotten and Norrbotten, enters the Gulf of Bothnia near the town of Pitea.

Porsgrund, *pors'groont*, a seaport of Norway, in the province of Christiansand, on a bay of the Skager Rack, with considerable trade in timber. Pop. 1750.

Rands, a lake in Norway, in the province of Christiania.

Roms'dal, a bailiwick of Norway, in the province of Drontheim. Pop. 117,220.

Ro'raas, a town of Norway, in the province of Drontheim, at the base of the Dovrefield Mountains; near it are famous copper-mines. Pop. 3500.—62, 32 N. 11, 17 E.

Rosendal', a small town of Norway, in the province of Bergen, on Hardanger Fiord, near which are rich coppermines.

Sa'la, a town of Sweden, in the government of Westmanland, remarkable for its silver-mines. Pop. 4836.—59, 57 N. 16, 30 E.

Sigtu'na, a small seaport of Sweden, in the government of Stockholm, on an arm of Lake Mælar.

Ska'ra, a town of Sweden, in the government of Skaraborg. Pop. 3122.

Skar'aborg, a *laen* or government of Sweden, between Lake Wener and Lake Wetter. Pop. 257,942.

Skien, *ske-en'*, a seaport of Norway, in the province of Christiansand, on a river flowing into a bay of the Skager Rack. Pop. 5226.—59, 10 N. 9, 30 E.

Smaalehnen, *smawl'a-nen*, a bailiwick of Norway, in the province of Christiania. Pop. 107,804.

Soderhamn, *so'der-ham*, a seaport of Sweden, in the government of Gefleborg, on an inlet of the Gulf of Bothnia, with cloth manufactures and considerable trade. Pop. 7937.—61, 18 N. 17, 2 E.

Soderkop'ing, a town of Sweden, in the government of Oestergothland, at the entrance of the Gotha Canal into the Baltic. Pop. 1700.—58, 26 N. 16, 20 E.

Sodermanland, an agricultural *laen* or government of Sweden. P. 147,186.

Stavan'ger, a bailiwick of Norway, in the province of Christiansand. Pop. 110,965.

Stavan'ger, the chief town of the above bailiwick, on the W. coast. Pop. 19,004.—58, 58 N. 5, 35 E.

Stock'holm, the metropolitan *laen* or government of Sweden, forming part of the ancient province of Sudermania, and containing the celebrated iron-mines of Danemora. Pop. 146,908.

Stock'holm, the capital of Sweden. Pop. 176,745.—59, 22 N. 18, 4 E. *See* REMARKS, p. 105.

Storakopparberg. *See* **Kopparberg.**

Sweden Proper, a large division comprehending the central portions of the kingdom, now divided into seven *laens* or governments.

Ta'na, a river of Lapland, which forms for 150 miles the boundary between Russia and Sweden, and falls into the Northern Ocean.

Tons'berg, a seaport of Norway, in the province of Christiania, on the W. side of Christiania Bay. Pop. 5000.—59, 18 N. 10, 23 E.

Tor'nea, a river of Sweden, has its source in the mountains of Norway, traverses Lake Tornea, and falls into the Gulf of Bothnia.

Tor'nea, a town formerly belonging to Sweden, but ceded to Russia in 1809; it stands on a small island in the river Tornea. Pop. 968.—65, 50 N. 24, 10. E.

Tor'risdal, a river in Norway, flowing into the Skager Rack at Christiansand.

Trom'soe, the northmost province of Norway. Pop. 54,019.

Tromsoe, the chief place in the above province, on a small island. Pop. 4073.

Tu'naberg, a town of Sweden, in the government of Sodermanland, on the Baltic, with large iron-works. Pop. 2500.—58, 40 N. 17, 0 E.

Tyri, *te'ree*, a lake of Norway, in the province of Christiania, 15 miles long.

Uddeval'la, a town of Sweden, in the government of Gottenburg, on an inlet of the Cattegat. Pop. 7037.

U'mea, a seaport on the Gulf of Bothnia, the chief town of the government of Westerbotten, situated on a river of the same name. Pop. 2818.—63, 49 N. 20, 27 E.

Upsa'la, a *laen* or government of Sweden, with extensive iron-works. Pop. 111,019.

Upsa'la, or **Up'sal**, the capital of the above government, an ancient city, the see of an archbishop, and the seat of a celebrated university, in which Linnæus was a professor. It was long the residence of the Swedish monarchs. Pop. 15,675.

Vardœ, an island of Finmark, with *Vardœhuus*, the most northern fort in Europe, on the N.E. coast.—70, 22 N. 31, 7 E.

Vig'ten Isles, a group of islands on the coast of Drontheim.

Wen'er, a large lake in Sweden, forming, by the Gotha Canal, one of the great channels of communication between Gottenburg and the Baltic.

We'nersborg, the chief town of the government of Elfsborg, on Lake Wener, near the efflux of the river Gotha. Pop. 5482.—58, 23 N. 12, 18 E.

Wermland, *verm'land*, a *laen* or government of Sweden, on the Norwegian frontier, with great iron-mines. Pop. 268,417.

Wes'teras, a commercial town of Sweden, capital of the government of Westmanland, and a bishop's see, on Lake Mælar. Pop. 6201.—59, 35 N. 16, 32 E.

Westerbot'ten, a *laen* or government of Sweden, in Norrland, comprehending West Bothnia. Pop. 106,435.

Wester Norrland, a maritime *laen* or government of Sweden, in Norrland, lying along the coast of the Gulf of Bothnia. Pop. 169,195.

Wes'tervick, a seaport of Sweden, in the government of Calmar, on the Baltic, with a good harbour. Pop. 6189.—57, 46 N. 16, 38 E.

West Fiord, a great sound separating the Lofoden Isles from the mainland of Norway, through which the tides of the Northern Ocean rush with great force and rapidity.

West'manland, a *laen* or govern-

ment of Sweden, containing the rich silver-mines of Sala. Pop. 128,491.

Wet'ter, a lake in Sweden, 90 miles long and 16 broad, communicating with the Baltic by the river Motala.

Wex'io, the chief town of the government of Kronoberg, Sweden Pop. 4935.—56, 44 N. 14, 51 E.

Wis'by, a seaport, the capital of the island of Gothland, and the see of a bishop. Pop. 6922.—57, 14 N. 18, 28 E. √

DENMARK

Is bounded N. by the Skager Rack; W. by the German Ocean or North Sea; S. by Schleswig-Holstein; E. by the Cattegat, the Sound, and the Baltic. It contains 14,553 square miles, and a population of 1,940,000.

Divisions.	Chief Towns.
Zealand, Moen, and Samsoe	COPENHAGEN, Roskilde, Elsinore, Stege.
Bornholm	Rönne.
Funen, Langeland, and Aeroe.	Odensee, Rudkiobing, Aeroeskiobing.
Laaland, Falster, etc.	Mariböe, Nakskov, Nykiobing.
Jutland	Aarhuus, Aalborg, Randers.

Straits, Gulfs, and Bays.—The Sound, the Great Belt, the Little Belt, Lym Fiord, Tannis Bay, Tammer Bay, Kioge Bay, Præsto Bay, Seiero Bay.

Capes.—The Skaw, the Horn.

European Dependencies.—In the Atlantic, Iceland; in the German Ocean or North Sea, the Faroe Islands.

Foreign Possessions.—In the West Indies, three of the Virgin Isles, viz., Santa Cruz, St Thomas, and St John; in the Arctic Ocean, Greenland.

REMARKS.

Denmark consists of Jutland, the northern portion of a peninsula (the *Chersonēsus Cimbrica* of the ancients) projecting from the north of Germany, and a number of islands to the east of the mainland. Exclusive of the isle of Bornholm, it lies between 54° 39′ and 57° 44′ N. lat., and between 8° 5′ and 12° 37′ E. long. Its length, from Laaland Island to the Skaw, is 210 miles; its breadth, from Copenhagen to the North Sea, 175 miles.

The Danish peninsula is a plain, fertile on the eastern side, sandy on the western side and towards the north, where, indeed, sandhills line the coast for nearly 200 miles. Small lakes are exceedingly numerous. The only notable feature in the outline of the mainland is Lym Fiord, which was separated from the North Sea by a strip of land till the year 1825, when a storm burst

through the barrier, converting the northern corner of Jutland into an island. On the other hand, large areas on the coast of Jutland have been wrested from the ocean, and are secured against it by huge dykes, as in the Netherlands. The islands, Zealand, Funen, Laaland, and Falster are fertile and pleasant; they form, indeed, the most valuable part of the country.

The moist climate of Denmark favours the growth of grass and roots rather than of grain; accordingly, the rearing of stock, especially of cattle and horses, and the dairy, engage most of the farmer's attention. Fully three-fifths of the population are employed in agriculture, and the law encourages the multiplication of small farms; but large estates also exist, with noble mansions, which form a striking feature in Danish landscapes. Dairy produce and live stock are the chief exports. Manufactured articles, timber, coals, and colonial produce, the chief imports.

The Danes are fair-complexioned, with blue eyes. The qualities of the Teutonic race, to which they belong, and their maritime situation, have made great numbers of them into first-rate seamen; and they have a considerable share in the carrying trade of the world. Schools of every grade are well organized, and it is rare to meet any native who cannot both read and write. The established religion is Lutheran, under the episcopal form. The government is a limited monarchy, once elective, but since 1660 hereditary. Parliament consists of two chambers, the upper one being called *Landsthing*, the lower one *Folksthing*. The capital, COPENHAGEN, situated on the eastern shore of Zealand, is also the chief emporium and chief fortress of the kingdom. It has excellent harbour and dock accommodation, and the circuit of its fortifications is five miles. It is regularly and handsomely built; it possesses many of the finest works of Thorwaldsen, the Danish sculptor; and its royal library and museum are particularly rich in northern literature and antiquities.

The European dependencies of Denmark are insular. The Faroe Islands, in Danish *Fär-öer*, *i.e.*, Sheep Islands, situated in the North Sea, between Shetland and Iceland, are 25 in number, 17 being inhabited. The shores are rock-bound, and the surface hilly. The largest island, Strömö, in which is Thorshavn, the residence of the governor, and seat of the local parliament called *Logthing*, has a peak 2800 feet high. There is no wood, but plenty of peat, and in one of the islands coal also. Notwithstanding the high latitude, the cold season is short, frost lasting only one month, so great is the effect of the surrounding ocean in equalizing the temperature. The inhabitants, numbering about 11,000, live by feeding sheep, fishing, and catching sea-fowl, of which the feathers are exported.

Iceland is a large island in the Atlantic, between 63° and 67° N. lat., and 13° and 25° W. long. Its length is 300 miles, and its breadth 200, with an estimated area of 40,000 square miles. The interior is rugged and mountainous, permanent glaciers beginning at an elevation of 4000 feet. Volcanic eruptions are frequent in

many parts of the island, Mount Hecla being the most celebrated of the active volcanoes. Glaciers and lava cover a great part of the island. Springs of hot water are numerous, of all degrees of temperature, up to that of ebullition. The most remarkable of these springs, called the Great Geyser, throws up columns of boiling water to the height of 90, 100, and sometimes even to above 150 feet, accompanied with a noise like that of cannon. The people, numbering about 72,000, are pure Scandinavians, tall, of florid complexion, and flaxen-haired. Their language is the purest form now spoken of the Gothic, from which the Teutonic languages, including our own, are derived. They are Lutherans in religion, the whole island forming a bishopric; and elementary instruction is universal among them. Their only town, Reikjavik, built almost entirely of wood, and seat of the local parliament called *Althing*, possesses several libraries and newspapers, a learned society, and an observatory. The climate is mild for the latitude, and the prevalent moisture favours the growth of grass, which is by far the most valuable crop. Large herds of reindeer, introduced in 1770, roam about in the interior; but the Icelander's reliance is on cattle, sheep, and horses, and on the produce of his fisheries. Besides horses, wool, and fishery produce, including feathers, he exports sulphur and Iceland moss.

The foreign possessions of Denmark are described under America.

EXERCISES.

How is Denmark bounded? What is its extent in square miles? What is its population? What are the divisions of Denmark? Name the chief towns. Where are Odensee, Copenhagen, Elsinore, Nakskov, Randers, Rudkiobing, Aarhuus, Rönne, Aalborg? etc. Name the islands.

Where are the Little Belt, the Sound, the Great Belt, Lym Fiord? Name the capes of Denmark. What are the European dependencies of Denmark? What are its foreign possessions?

Of what does Denmark consist? Between what degrees of latitude and longitude is it situated? What are its length and breadth? Describe its surface. Contrast the eastern and western coasts. Tell the story of Lym Fiord. What feature of the Netherlands is reproduced in Jutland? What kind of farming is indicated by the climate? What kind of farm-produce figures in the exports? What about large and small farms?

How do the Danes look in the face? How do they stand in respect of elementary instruction? What is the established religion? Of what nature is the government? What else is Copenhagen to Denmark, besides being the seat of its government? What is the circuit of its fortifications? In what treasures, artistic, literary, and antiquarian, is it particularly rich?

What is the meaning of the name *Faroes?* Describe the shores and the surface of these islands. Name the largest, and the capital of the group. How is the shortness of the cold season accounted for? By what industries do the islanders live?

Give the dimensions of Iceland. At what elevation do permanent glaciers begin? Describe the Great Geyser. Describe the Icelander's appearance. What of his language and religion? What facts in Reikjavik indicate great literary activity? Which one of the Icelander's crops is the most valuable to him? Name the principal exports.

DESCRIPTIVE TABLE.

Aalborg, *ol'borg* (eel castle or town), the capital of Jutland, on the S. shore of the Lym Fiord, with a good harbour. Pop. 14,152.—57° 2′ N. lat. 9° 55′ E. long.

Aarhuus, *or'hooss* (town at the water-course), a seaport on the E. coast of Jutland, near the N. extremity of the Great Belt, with a good trade. Pop. 24,831.—56, 9 N. 10, 13 E.

Aeroes'kiobing, the chief town in the island of Aeroe, on its N.E. side. Pop. 1578.

A'mak, or **Amager,** a small island in the Sound, off Zealand. About a third part of Copenhagen is built on it; the other two-thirds are on Zealand. Pop. 9000.

An'holt, an island in the Cattegat, with a lighthouse 122 feet high. Pop. 146.

Belt, Great, a strait between the islands of Zealand and Funen, about 12 miles broad, and of dangerous navigation.

Belt, Little, a strait between Funen and the peninsula, varying from 1 to 10 miles in width, and hazardous to navigators.

Born'holm, an island in the Baltic, about 20 miles in length and 15 in breadth, containing about 100 villages. It is rich in corn and cattle, and has a valuable salmon fishery. Pop. 32,000. —55, 17 N. 14, 45 E.

Cat'tegat, a large channel or sound separating the Danish peninsula from Sweden.

Copenha'gen, the capital of the kingdom, and seat of a university. Pop. 234,850.—55, 41 N. 12, 34 E. *See* REMARKS, p. 115.

Elsinore', Dan. *Helsingör* (the shore near the town of Helsing), a seaport in Zealand, 23 miles N. of Copenhagen, on the narrowest part of the Sound. The castle of Cronborg commands the passage of the Sound, which is about 3 miles broad. Pop. 8978.—56, 2 N. 12, 36 E.

Faa'borg, a seaport town on the S. coast of the island of Funen. Pop. 3476.

Fal'ster, a fertile and pleasant island in the Baltic, so productive, especially of fruit, as to be styled the orchard of Denmark. Pop., with Laaland, 97,007.—54, 50 N. 12, 0 E.

Fan'oe, an island on the S.W. coast of Jutland. Pop. 6600.

Fa'roe Islands. *See* REMARKS, page 115.

Freder'cia, a seaport and fortress in Jutland, at the N. entrance of the Little Belt. Pop. 8275.

Fredericks'berg, or **Fredericks'-borg,** a town in the northern part of the island of Zealand, about 21 miles N.N.W. of Copenhagen. Pop. 26,510.

Fredericks'havn, the most northerly seaport town in the province of Jutland, on the Cattegat. It has a lighthouse and citadel. Pop. 2891.—57, 26 N. 10, 3 E.

Fredericks'vark, a market town in the island of Zealand, at the northern end of the Roskilde Fiord, with a royal residence, copper-works, and cannon foundry. Pop. 879.

Fu'nen, a large and fertile island, separated from the peninsula by the Little Belt, and from Zealand by the Great Belt. It is 49 miles long and 33 broad. Pop. 205,000.—55, 20 N. 12, 20 E.

Heligoland', a small island about 26 miles from the mouths of the Eyder and the Elbe, now belonging to Britain. Pop. 2000.—54, 10 N. 7, 53 E.

Hiorring, *he-or'-ing,* a town in the north of the province of Jutland, 21 miles N. of Aalborg. Pop. 4308.

Horn, The, a cape on the S.W. coast of Jutland.—55, 34 N. 8, 5 E.

Hor'sens, a seaport in Jutland, on the E. coast. Pop. 12,654.—55, 52 N. 9, 50 E.

Ice'land. *See* REMARKS, page 115.

Ise Fiord, an inlet on the N. side of the island of Zealand, 20 miles long and 10 miles broad.

Jut'land, a large province of Denmark, which formerly comprised the whole peninsula; but the name is now confined to the northern division, extending from 55° 25′ to 57° 43′ N. lat., in length 160 miles, with an average breadth of 70. Pop. 868,511.

Ki'öge, a seaport on the E. coast of Zealand, 20 miles S.E. of Copenhagen. Pop. 3122.

Ki'öge Bay, an inlet of the Baltic, on the E. coast of Zealand.

Kol'ding, a town in Jutland, situated at the head of a bay in the Little Belt. Pop. 7141.

Laa'land, an island at the entrance of the Baltic, 40 miles long and 14 broad. It is the most fertile tract in the Danish dominions. Pop., with Falster, 97,000.—54, 48 N. 11, 25 E.

Lan'gèland, an island between Zealand, Laaland, and Funen, 35 miles long and from 3 to 5 broad. Pop. 20,000. 54, 56 N. 10, 46 E.

Lessoe, or **Lasoe**, *la'so*, an island in the Cattegat, E. of the N. part of Jutland. The male inhabitants are chiefly employed in fishing, and the females in agricultural pursuits. Pop. 2400.

Lym Fiord, a long narrow gulf in Jutland, which runs westward from the Cattegat across the peninsula almost to the North Sea.

Mar'iboe, a town near the centre of the island of Laaland. Pop. 2403.

Mid'delfart, a seaport town in the N.W. of the island of Funen, on the Little Belt. Pop. 2315.

Mo'en, a small island in the Baltic, to the E. of Zealand.

Nakskov, a seaport in the island of Laaland, on a bay on its W. coast; it has a good trade in corn. Pop. 5278.

Ny'borg (new town), a seaport on the E. coast of Funen, with a strong citadel and shipbuilding docks. Pop. 5402.—55, 19 N. 10, 46 E.

Ny'kiobing, a seaport in the island of Falster, on the Guldborg Sound. Pop. 4560.

Odensee', the capital of Funen, situated on a river, about a mile from the sea. It has considerable manufactures of woollen cloths, leather, and soap. It is the residence of a bishop, and of the chief magistrate of Funen. Pop. 20,804.—55, 25 N. 10, 22 E.

Præ'sto Bay, an inlet of the Baltic, on the south-east coast of Zealand.

Ran'ders, a town in Jutland, with a considerable trade in corn. P. 13,457.

Reikjavik, the only town in Iceland. *See* REMARKS, p. 116.

Ring'kiobing, a seaport in Jutland, on the W. coast, with manufactures of leather, lacquered ware, and tobacco. Pop. 2035.

Ron'ne, a seaport on the W. coast of the island of Bornholm, of which it is the capital. Shipbuilding and manufactures of woollen cloth and tobacco are carried on here. Pop. 6471.

Ros'kilde, in Zealand, the ancient capital of Denmark, now remarkable only for its Gothic cathedral, in which the kings of Denmark are buried. Pop. 5893.—55, 36 N. 12, 0 E.

Rud'kiobing, the chief town of the island of Langeland, on its W. coast. Pop. 3179.

Sam'so, an island in the Great Belt, between Zealand and Jutland. Area 40 sq. m. Pop. 5400.

Ska'ger Rack, a large sound, in the North Sea, separating Jutland from Norway.

Skan'derborg, a town in the province of Jutland, on the peninsula between lakes Skanderborg and Henning. Pop. 1792.

Skaw or **Ska'ger Cape**, a promontory on the northern extremity of Jutland, with a lighthouse.—57, 43 N. 10, 42 E.

Sound, a strait between Sweden and the island of Zealand, being about 3 miles across from Elsinore to Helsingborg, in Sweden. *See* **Elsinore.**

Ste'ge, the principal town in the island of Moen, on its W. coast. Pop. 1931.

Svend'borg, a town on the S. coast of the island of Funen, with shipbuilding docks and a good export trade. Pop. 7184.

Tan'nis Bay, an inlet of the Skager Rack, on the N. coast of Jutland.

Thisted, *tis'ted*, a seaport town in the province of Jutland, on Thisted Bay, an arm of Lym Fiord. Pop. 4184.

Veile, *vi'leh*, a town of Jutland, at the head of the Viele Fiord, 13 miles north-west of Fredericia. Pop. 7145.

Vi'borg, an ancient town, on a small lake, nearly in the centre of Jutland. Pop. 7653.—56, 27 N. 9, 23 E.

Zea'land, an island between the Cattegat and the Baltic. It is about 170 miles in circumference. Area 2800 sq. m.; pop., with Möen, 721,703. Its aspect is finely varied with gentle eminences and cultivated fields; its soil is fertile, and its numerous bays and creeks abound with fish. Here are concentrated most of the manufactures and trade of Denmark.

THE NETHERLANDS

ARE bounded N. and W. by the North Sea; S. by Belgium; E. by the German Empire. The area is 12,728 square miles, and the population 3,982,000.

Provinces.	Chief Towns.
Groningen	Groningen, Winschoten, Delfzyl.
Drenthe	Assen, Meppel.
Friesland	Leeuwarden, Harlingen.
Overyssel	Zwoll, Deventer.
Guelderland	Arnheim, Nimeguen, Zutphen.
Utrecht	Utrecht, Amersfoort.
North Holland	AMSTERDAM, Haarlem, Alkmaar, Hoorn.
South Holland	The Hague, Rotterdam, Leyden, Dort, Delft.
Zealand	Middleburg, Flushing, Veere.
North Brabant	Bois-le-Duc, Breda, Bergen-op-Zoom.
Limburg	Maestricht.

Islands.—Walcheren, North Beveland, South Beveland, Tholen, Schouwen; Over Flakkee, Voorne, Ysselmonde; Texel, Vlieland, Ter Schelling, Ameland, East Frisian Isles.

Seas and Bays.—Zuyder Zee, Lauwer Zee, Dollart Bay.

Rivers.—The Lower Rhine, dividing into two main branches, Waal and Leck, and communicating with the Maas on the one hand, with the Yssel on the other.

European Dependency.—Grand-duchy of Luxemburg. In 1830, when the Belgians, who had been united with the Dutch under one sovereign since the fall of Napoleon I., set up a separate kingdom, Luxemburg was divided, a small part of it being assigned to the new kingdom of Belgium, while the greater part of it received a constitution and legislature of its own, having no further connexion with the diminished kingdom of the Netherlands than is implied in the King of the Netherlands being its Grand Duke.

Foreign Possessions.—In Asia, Java, the Moluccas and other islands of the East Indian Archipelago; also portions of Sumatra, Borneo, Celebes, and New Guinea. In America, Surinam, on the mainland of South America; Curaçoa, and other West Indian islands.

REMARKS.

The kingdom of the Netherlands is situated between 50° 46′ and 53° 34′ N. lat. and between 3° 22′ and 7° 14′ E. long. Its length,

from the north of Friesland to the south of North Brabant, is about 150 miles, its breadth about 110 miles.

The country is one low and level plain, intersected by numberless ditches and canals. Yet there are features of interest—meadows of wide extent and bright verdure, herds of well-fed cattle, sheets of water, clusters of trees, and, in the vicinity of large towns, elegant villas in trim gardens and parks, decorated with statuary. The windmill, characteristic of Dutch landscapes, was a necessity before the invention of the steam-engine, because in so level a country water-power could not be had.

On a colossal scale, man has here battled with ocean. The Zuyder Zee was formed out of an inland lake by successive irruptions of the North Sea; and only in 1395 was it enlarged to its present extent. Works are now in progress, however, including one huge dyke 25 miles long, by which an area of arable land equal in size to the county of Surrey will be rescued from the waters. The islands at the mouth of the Zuyder Zee are merely the rising-grounds of the submerged plain. In like manner, the islands of Beveland, Walcheren, and Schouwen, at the mouth of the Scheldt, are vestiges of a district overwhelmed in the tenth century. To protect themselves from such calamities, the Dutch have constructed along the coast, wherever the natural defence of sandhills is wanting, stupendous embankments of earth, faced with stone or wood, and in some places so broad as to admit of two carriages abreast. Similar dykes are built along canals and rivers, with sluices at intervals, by means of which the country can be laid under water on the approach of an enemy. This presupposes, what is often the fact, that the bed of the canal or river in question is higher than the adjacent land. Drained day and night by windmill-pumps, the land has shrunk and somewhat subsided, whereas the bed of canal and river has somewhat risen through accretions of sediment. The greater part of the surface, indeed, is too low for natural drainage, and some *polders*, as the lands enclosed by dykes are called, lie even 16 feet below the ocean-level. Most of the canals are navigable, and two of them are so by the largest ships, viz., the North Holland canal, 40 miles long, which connects Amsterdam with the North Sea at Helder; and the Y-muiden canal, finished in 1877, which connects Amsterdam with the North Sea at Wijk, reducing the distance to 15 miles. During three months in winter, most of the canals are highways for skaters; even women skate along to market, with baskets of eggs on their heads, and the very children skate to school.

The sagacity and persistence which enable the Dutch now to hold their own against the North Sea are displayed in other departments. From the Bourtanger and Peel morasses on the German frontier, they supply themselves with fuel; not having stone-quarries, they make small bricks hard enough to serve as paving-stones; their country being chiefly adapted for grazing, they accept the fact, and accordingly export immense quantities of

butter and cheese, importing grain; they grow flax, hemp, and rape, expressing oil from the seeds, and forming the refuse into cakes for fattening cattle; they cultivate vegetables, bulbs, and flower-seeds for the foreign market, the strip of land next the downs, from Leyden to Haarlem, being especially famous for flowers and medicinal herbs; they have made themselves a name in various manufactures, as linen, gin, and earthenware called delft, after one of their towns; it was a fisherman of Zealand who, in the second half of the fourteenth century, fell upon the plan of salting and packing herrings, and the Dutch still pursue the herring-fishery both on their own coasts and on those of Britain; they make their colonies pay their own expenses and more; and from these colonies they supply both themselves and great part of Germany with colonial produce.

The Dutch are a Teutonic race, speaking a language akin to Low German. Two-thirds of them are Protestants of the Reformed Church, the remaining third being Roman Catholics. Elementary instruction is universally diffused; the schools are carefully graded; and the universities of Leyden, Utrecht, and Groningen maintain their ancient reputation. The government is a limited hereditary monarchy, with two legislative chambers. Notwithstanding energy of race, and vigorous administration on the part of the state, paupers are said to form one-twentieth of the whole population. To mitigate the evil, the experiment of pauper colonies within the kingdom is being tried.

The great commercial city of AMSTERDAM, in North Holland, is usually mentioned as the capital of the Netherlands. The name, which means Dam on the Amstel, a stream flowing into an arm of the Zuyder Zee called Y, is characteristic of the country. Owing to the marshy site, almost the whole city is built upon piles. Its aspect is thoroughly Dutch, many of the streets having in the centre a navigable canal lined with trees, and crossed at short intervals by bridges, the total number of which amounts, it is said, to 300. About one-tenth of the population consists of Jews, among whom the Portuguese form a separate section with a reputation as lapidaries. They have made Amsterdam the chief seat of the diamond-cutting industry. A statue has been erected here to one of the greatest of modern philosophers, Spinoza the Jew, who was born at Amsterdam in 1632. Politically, however, THE HAGUE, in South Holland, is the capital of the Netherlands; for it is the seat at once of the court, the legislature, and the public offices. It retains the residential character indicated by its name, which originally meant The Count's Park. Of all Dutch towns, it is the least Dutch-looking. French is so extensively spoken among the inhabitants, that the performances in the theatre are given alternately in French and in Dutch. The Hague possesses a famous picture-gallery, and is interesting to us as the birthplace of the Prince of Orange, who became William III. of Great Britain and Ireland.

The Grand-duchy of Luxemburg is detached from the Netherlands, occupying a part of the Ardennes plateau conterminous with France, Belgium, and Prussia, and draining wholly into the Moselle. The surface is broken and mountainous, with plenty of wood, and many heaths and bogs. Like the Netherlands, it raises cattle, sheep, and horses in excess of its own wants, and imports grain. Unlike the Netherlands, it is rich in iron-ore, of which it sends great quantities to Belgium and Prussia. The inhabitants are chiefly of German origin, and the Grand-duchy is included in the German Customs-Union. On the other hand, the French system of coins, weights, and measures has been adopted, and the official language is French, most of the inhabitants understanding both French and German. There is but one legislative chamber. Almost the whole population is Roman Catholic.

The foreign possessions of the Netherlands are described under Asia and America.

EXERCISES.

How are the Netherlands bounded? What is their extent in square miles? What is the amount of the population? Name the provinces. What are the principal towns in Zealand, North and South Holland, Utrecht? etc. Where is Rotterdam, Arnheim, Amsterdam, Breda, Nimeguen, Bergen-op-Zoom, Deventer, Zutphen? etc. What are the principal rivers? Name the seas and bays. Name the islands. Where is the Zuyder Zee? What are the branches of the Rhine in the Netherlands? Where is Ter Schelling, Dollart Bay, Walcheren, Ameland, South Beveland, Lauwer Zee, Vlieland? etc. How is the Grand-duchy of Luxemburg connected with the kingdom of the Netherlands? Narrate the events of 1830, as they affected the kingdom of the Netherlands. Name the principal Dutch colonies in Asia and America. Which one of them all is on the mainland?

Between what degrees of latitude and longitude are the Netherlands situated? What are their length and breadth? What is their general aspect? By what is the uniformity relieved? Account for the windmills characteristic of a Dutch landscape.

How and when was the present Zuyder Zee formed? What works are now in progress to lessen it? Of what are the islands off the mouth of it the remains? Name the islands similarly formed off the mouth of the Scheldt. What are the natural defences, and what the artificial, against the encroachments of the sea? How can great part of the country be flooded in case of invasion? What are the so-called *polders*, and how are they drained? By what canals do ocean-going ships reach Amsterdam? At what places do ships enter these canals from the ocean respectively? Of what use are the canals when frozen over?

What is the fuel of the Dutch, and whence do they draw it? What do they use for paving-stones? What sort of farm produce do they export? From what crops do they get oil and oil-cake? What district is famous for flowers and medicinal herbs? Mention three manufactured articles for which they have made themselves a name. Where do they carry on the herring-fishery? What point is noteworthy in their colonial management? What country, besides their own, do they supply with colonial produce?

What of the race, language, and religion of the Dutch? What is said about the schools? Name the three universities. What is the government of the Netherlands? State the ratio that paupers bear to the whole population, and the nature of the experiment now being made to diminish their number.

Politically speaking, what is the capital of the Netherlands? Explain the names Amsterdam and The Hague. Describe Amsterdam. What proportion of its inhabitants are Jews? What industry have the Portuguese Jews established there? What language competes with Dutch in the theatre at The Hague? Name two famous men born respectively at Amsterdam and The Hague.

Describe the situation of the Grand-duchy of Luxemburg, and its surface. Mention one department of industry in which it resembles the Netherlands, and another in which it differs from them. In what two particulars are the inhabitants German? What have they adopted from France? What about their legislature and their religion?

DESCRIPTIVE TABLE.

Alkmaar′, a fortified town in North Holland, situated on the Helder Canal. It has a great trade in butter and cheese. Pop. 13,304.—52° 34′ N. lat. 4° 45′ E. long.

Ameland, *a′me-land*, an island to the N. of Friesland. Pop. 2354.

A′mersfoort, a pleasant town in the province of Utrecht, with considerable manufactures. Pop. 13,704.—52, 9 N. 5, 22 E.

Amsterdam′. *See* REMARKS, p. 121. Pop. 317,011.—52, 22 N. 4, 53 E.

Arnheim, *arn′hime*, the chief town of Guelderland, on the Rhine. Pop. 40,978.—51, 59 N. 5, 54 E.

Ass′en, the chief town in the province of Drenthe. Pop. 7932.—53, 0 N. 6, 33 E.

Ax′el, a small but strongly fortified town in Zealand. Pop. 2658.

Ber′gen-op-Zoom′, an important town and fortress in North Brabant, communicating with the East Schelde by a canal. Pop. 10,419.—51, 29 N. 4, 17 E.

Beveland, North, *bev′e-land* (the land of the oxen or beeves), an island in the province of Zealand, about 13 miles long and 8 broad. By a terrible inundation, in 1532, it was so completely overwhelmed that for many years nothing but the tops of spires were to be seen.

Beveland, South, an island in Zealand, separated from North Beveland by the island of Wolfersdyk. It is 24 miles long and from 5 to 8 broad, and is the largest and most agreeable of all the Zealand Isles.

Bois-le-Duc, *bwa-le-deuk′* (the duke's wood), a strongly fortified town, the capital of North Brabant, at the confluence of the Dommel and the Aa. Pop. 24,529.—51, 41 N. 5, 18 E.

Brabant′, North, formerly called Dutch Brabant, a province to the S. of Guelderland. Although a great part of it is covered with moss, heath, and wood, it is very productive in corn, hops, and flax. It contains 1942 square miles. Pop. 475,493.

Bre′da, a town in North Brabant, on the Merk, near its junction with the Aa. It is considered one of the strongest places in the Netherlands. Pop. 17,109.—51, 35 N. 4, 46 E.

Briel, or **Brielle**, *breel*, a town on the N. coast of the island Voorne, having a large and commodious harbour. Pop. 4442.—51, 54 N. 4, 10 E.

Camperdown′, a village on the coast of North Holland, off which the British fleet under Admiral Duncan defeated De Winter in 1797.—52, 43 N. 4, 39 E.

Delft, *delf*, a town in South Holland, between Rotterdam and Leyden, formerly noted for its manufacture of earthenware, and celebrated as the birthplace of Grotius. Pop. 26,028.

Delf′zyl, a strong seaport in Groningen, on Dollart Bay. Pop. 5873.

Deven′ter, a town in Overyssel, situated on the right bank of the Yssel. Pop. 19,162.—52, 15 N. 6, 9 E.

Dol′lart Bay, a large arm of the North Sea, to the E. of Groningen, at the mouth of the river Ems. It is said to have been formed by an irruption of the sea towards the close of the 13th century.

Dom′mel, a river of North Brabant, which receives the Aa at Bois-le-Duc, below which it falls into the Maas.

Dort, or **Dor′drecht** (the pasture on the water), an ancient city in South Holland. It was the residence of the ancient counts of Holland, and the birthplace of the famous brothers De Witt. Here was held in 1618–19 the celebrated Synod of Dort, by which the tenets of Arminius were condemned. Pop. 27,292.—51, 49 N. 4, 40 E.

Drenthe, *dren′teh*, a province to the S. of Groningen. Extent 955 sq. m.; pop. 120,734.

E′dam, a town on the Zuyder Zee, with a great trade in cheese. Pop. 4024.

Flush′ing, or **Vlissingen**, a strong seaport in the island of Walcheren, at the mouth of the Schelde. Pop. 10,056. —51, 26 N. 3, 35 E.

Fries′land, a province in the N. of the Netherlands, having the Zuyder Zee on the W. and the North Sea on the N. It contains 1027 square miles and 329,309 inhabitants.

Goes, *hooce*, a strong town in the island of South Beveland. Pop. 6394.

Gor′cum, a town of South Holland, on the Waal, near its junction with the Maas. Pop. 9697.—51, 50 N. 4, 57 E.

Gou′da, a town of South Holland, on the Yssel, noted for its cheese and manufacture of tobacco-pipes. Pop. 18,118.—52, 2 N. 4, 43 E.

Gro′ningen, a province in the north-eastern extremity of the kingdom, containing 882 square miles, and a population of 253,246. It is protected by dikes against the sea, and intersected by numerous ditches and canals for carrying off the water. Its pastures are extremely rich.

Gro′ningen, the capital of the province of the same name, is a handsome city, situated at the junction of three great canals. It possesses considerable trade, and is the seat of an ancient university. The church of St Martin is a noble Gothic edifice, with a tower 330 feet high. Pop. 46,058. –53, 13 N. 6, 34 E.

Guel′derland, a province to the S.E. of the Zuyder Zee, and separated from N. Brabant by the Maas, contains 1862 square miles, and a population of 466,805. It is watered by the Rhine, the Waal, the Yssel, and the Leck.

Haar′lem, a town in North Holland, on the river Spaaren, communicating by canals and by railway with Leyden and Amsterdam. In its principal church is an organ, considered one of the finest in the world, containing nearly 5000 pipes, the largest 32 feet long and 15 inches in diameter. Pop. 36,976.—52, 22 N. 4, 38 E.

Haar′lem Meer, formerly a lake between Amsterdam, Leyden, and Haarlem, communicating with the Zuyder Zee. In 1853 it was drained and converted into arable land.

Hague. *See* REMARKS, p. 121. Pop. 113,460.—52, 4 N. 4, 18 E.

Har′lingen, a seaport of Friesland, on the Zuyder Zee. Pop. 10,735.—53, 10 N. 5, 26 E.

Hel′der, a town in North Holland, with a strong fortress, which commands the entrance of the Zuyder Zee. Pop. 19,676.—52, 57 N. 4, 44 E.

Helvoetsluys, *hel-voot-slois′*, a town on the S. side of the island Voorne, in South Holland, having an excellent harbour and extensive dockyards. Pop. 4504.—51, 49 N. 4, 8 E.

Hol′land, North and **South**, two contiguous provinces bordering on the North Sea; they are remarkable for the density of their population, the number of their towns and villages, and the triumphs of persevering industry over the difficulties of natural position. North Holland has a pop. of 679,990; South Holland, 803,530.

Hoorn, a seaport on the bay of the Zuyder Zee, with considerable trade and manufactures. Pop. 10,200.—52, 38 N. 5, 3 E.

Kam′pen (the field), a town in Overyssel, on the Yssel. Pop. 17,414.

Lau′wer Zee, an arm of the sea on the N. of Groningen.

Leck, a river which branches off from the Rhine in Utrecht, and joins the Maas above Rotterdam.

Leeuwar′den, the chief town of Friesland, on the Ee. It is intersected by canals, the banks of which are shaded with trees, so as to form delightful promenades. Pop 29,000.—53, 12 N 5, 47 E.

Ley′den, one of the principal cities of the kingdom, on a branch of the Rhine, in South Holland. It is intersected by a number of canals, forming upwards of 50 small islands, which are connected by numerous bridges. Leyden is the seat of a celebrated university, and has produced many eminent men; the library contains a rich collection of oriental manuscripts. Pop 41,298.—52, 9 N. 4, 29 E.

Lim′burg, a province, consisting mostly of an extensive and well-culti-

vated plain, on both sides of the Maas. At the separation of the Netherlands from Belgium, in 1831, the part E. of that river, including the city of Maestricht, with an extent of 885 square miles, was assigned to the Netherlands. Pop. 242,122.

Lux'emburg, Duchy of. *See* REMARKS, page 122.

Lux'emburg (the city of light), the capital of the grand-duchy of the same name. Here are many interesting remains of Roman antiquity. Pop. 16,679. —49, 37 N. 6, 9 E.

Maas, or **Meuse,** a large river which rises in the S. of Champagne, in France, and flows through Namur, Liège, and Limburg. After forming the N. boundary of North Brabant, and being joined by the Waal, it falls into the North Sea below Rotterdam.

Maes'tricht, a town in Limburg, situated on the Maas, near its confluence with the Jaar. Pop. 28,557.—50, 51, N. 5, 41 E.

Mep'pel, a town in Drenthe, the largest in the province, on a tributary of the Vecht. Pop. 8238.

Mid'dleburg, the principal town of the province of Zealand, situated near the centre of the island of Walcheren. It is a place of great antiquity, and of considerable trade. Pop. 16,046.—51, 30 N. 3, 37 E.

Nim'eguen, a town in Guelderland, on the left bank of the Waal. Pop. 24,980.—51, 50 N. 5, 52 E.

Overflak'kee, an island at the entrance of the Maas into the North Sea.

Overys'sel, a province in the E. of the Netherlands, containing 1240 square miles and 271,069 inhabitants.

Rhine. *See* GERMANY.

Roermond', a town in the province of Limburg, at the confluence of the Roer and the Maas. Pop. 10,470.

Rot'terdam (the embankment on the Rotte), a seaport and city of the first commercial importance, situated on the Maas. Although 20 miles from the North Sea, it has great facilities for trade, the streets being intersected by canals deep enough to receive large vessels. This was the birthplace of Erasmus, to whose memory his fellow-citizens have erected a bronze statue. Pop. 157,270.—51, 55 N. 4, 29 E.

Schelling, *shel'ling,* an island about 9 miles from the coast of Friesland. It is 14 miles long and 3 broad. Pop. 2775.

Schiedam, *she-dam',* a town of South Holland, famous for its manufacture of gin or Hollands. Pop. 23,035.—51, 55 N. 4, 20 E.

Schouwen, *shou'en,* an island at the mouth of the Schelde, 15 miles long and 5 broad.

Sluys, *slois,* Fr. *l'Ecluse* (the sluice), a town of Zealand, near the mouth of the Schelde. Pop. 9800.

Tex'el, an island at the entrance of the Zuyder Zee, separated from the continent by the narrow channel of Mars-diep. It is about 12 miles long and 6 broad. Near this island Admiral Blake defeated the Dutch fleet under Van Tromp in 1653. Pop. 5000.—53, 5 N. 4, 40 E.

Tho'len, a fertile and well-cultivated island at the mouth of the Schelde, about 12 miles long and 6 broad.—51, 30 N. 4, 8 E.

Til'burg, a town in North Brabant, with considerable manufactures. Pop. 28,390.

Utrecht, *u'trekt,* a province to the E. of North and South Holland, and S. of the Zuyder Zee. Its superficial extent is 532 square miles, and its population 197,638.

Utrecht, the *Ultra-Trajectum* of the Romans, is the capital of the province of Utrecht, and the seat of a celebrated university. Here were concluded two memorable treaties,—the one in 1579, uniting the Seven Provinces against the Spaniards,—the other in 1713, terminating the war of the Spanish Succession. Pop. 71,337.—52, 6 N. 5, 8 E.

Vecht, a river which rises in Westphalia, and, after uniting with several streams, falls into the Zuyder Zee.

Veer, *vair,* a town in the N.E. of the island of Walcheren.

Venloo', a town in the province of Limburg, on the Maas, with considerable trade and manufactures. Pop. 9133.

Vlie'land, a small island at the mouth of the Zuyder Zee, 8 miles in length and 3 in breadth. Pop. 620.—53, 17 N. 5, 3 E.

Voorn, or **Voorne,** an island formed by two mouths of the Maas, about 15 miles in length and 5 in breadth.

Waal, a large branch of the Rhine, flowing westward, and joining the Maas near Gorcum.

Walcheren, *wal'ker-en,* the most populous and best cultivated of the islands that compose the province of Zealand. It is 12 miles in length and 8 in breadth. Besides the towns of Middleburg, Flushing, and Veer, it

contains a number of villages. Pop. 40,000.

Winschoten, *win'sko-ten*, a town in Groningen, to the E. of the capital. Pop. 6640.

Yssel, *i'sel*, a branch of the Rhine, passes Zutphen and Deventer, and falls into the Zuyder Zee.

Ysselmonde, *i-sel-mon'deh* (the mouth of the Yssel), a small island in South Holland, formed by the Maas, the Merwe, and the Yssel.

Zaandam', or **Saardam'**, a town in North Holland on the Y, an arm of the Zuyder Zee, with an extensive trade in timber. Here Peter the Great of Russia worked as a common shipwright. Pop. 13,171.

Zea'land, a province composed chiefly of islands, viz., Schouwen, Duieveland, Tholen, Walcheren, North and South Beveland, Wolfersdyk, and a strip of land on the continent, along the bank of the West Schelde. Its area is 640 square miles, and its population 189,306.

Zierikzee, *zee'rik-zay*, a town in Zealand, capital of the isle of Schouwen. Pop. 7139.

Zut'phen, a town in Guelderland, on the Yssel. Pop. 14,822.

Zuy'der Zee, a large gulf of the North Sea, about 80 miles long from N. to S., and from 15 to 30 broad. It was formed in 1225 by an irruption of the ocean; formerly it was a great inland lake, called by the ancients *Flevo*.

Zwoll, the chief town of Overyssel, situated between the Yssel and the Vecht. Here Thomas-à-Kempis died in 1471. Pop. 22,759.

BELGIUM

Is bounded N. by the Netherlands; W. by the North Sea; S. by France; E. by Rhenish Prussia. It contains 11,350 square miles, and a population of 5,477,000.

Provinces.	Chief Towns.
Antwerp	Antwerp, Mechlin.
East Flanders	Ghent, Oudenarde, Dendermonde, St Nicholas.
West Flanders	Bruges, Ostend, Courtray, Ypres, Nieuport.
Hainault	Mons, Tournay, Charleroi.
South Brabant	BRUSSELS, Louvain, Tirlemont, Waterloo.
Namur	Namur.
Liège	Liège, Verviers.
Limburg	Hasselt, Tongres, St Tron.
Luxemburg	Arlon, Bastogne, Bouillon.

Rivers.—The Schelde, with its tributaries the Lys, the Haine, the Dender, and the Dyle; the Maas or Meuse, with its tributary the Sambre.

REMARKS.

Belgium lies between 49° 30′ and 51° 30′ N. lat., and between 2° [illegible] and 6° 5′ E. long. Its length from east to west is about 140 miles, and its breadth from north to south about 100 miles.

On the whole, Belgium presents a pleasing variety of plains and gentle eminences, meadows and rich corn-fields. But there is a great difference between the north-western districts, which, with sea-embankments and even *polders*, resemble the Netherlands, and

the south-east, where the forest of Ardennes comes in from France, creating a hilly region, which is especially picturesque along the Meuse. To this hilly region belongs the great coal and iron field which occupies the greater part of the province of Hainault and a considerable part of that of Liège, and skirts the provinces of Namur and Luxemburg. There also lead, and paving and building stones abound. The climate of Belgium resembles that of the southern counties of England, only that the summers are warmer and the winters more severe. The whole country is studded with manufacturing towns and villages, which have made Belgium the most densely inhabited country in Europe, 482 persons to the square mile. Very notable for size and architectural beauty, in the larger towns, is the *Hôtel de Ville, i.e.*, Town-Hall, and also the cathedral—monuments of the industrial and commercial pre-eminence of the country from the twelfth to the sixteenth century.

Foremost among Belgian industries is agriculture, which, being carried on to a large extent with the spade, is akin to gardening. In spade-husbandry, not only is the ground dug, but the seed is also covered with the spade, earth being thrown over it out of trenches, which are dug at intervals of five feet. As the position of these trenches is regularly shifted from year to year, the whole ground is trenched every five years to a depth of about eighteen inches. To this continual trenching of the ground, as also to the careful accumulation and distribution of manure, solid and liquid, is the extraordinary fertility of Belgian farms ascribed. The same crops are grown in Belgium as in England, with the addition of beetroot for sugar, rape for oil, and flax. About a fourth of the entire population are engaged in agriculture, and fully one-fifth in manufacturing industries. Flemish linen, Mechlin lace, and Brussels carpets are of European reputation. The cloth of Verviers, the cutlery of Namur, and the foundries of Liège are also famous. The seafaring population is small, consequently both the foreign commerce and the navy of Belgium are insignificant.

The great majority of the inhabitants are Flemings, akin to the Dutch in race and language; but, in the south-east, the population is chiefly Walloon, akin to the French in race and language. Official notices are posted up in both Flemish and French, but most newspapers and all books of mark appear in French only. The masses are Roman Catholic; and the Roman Catholic clergy, through teaching orders of monks and nuns, manage most of the middle and elementary schools. Further, the Roman Catholic university of Louvain is more numerously attended than the strictly national universities of Brussels, Ghent, and Liège, which have no theological faculty. The few Protestant ministers, as well as the Roman Catholic priests, are salaried by the state. The government is a monarchy, hereditary in the line of Prince Leopold of Saxe-Coburg, who became first king of Belgium in 1830, and limited by two chambers, the members of both of which are elected directly by the people. The capital, BRUSSELS, in S. Brabant, is,

as in other respects, so in this, a little Paris, that the ancient boulevards have been converted into a spacious circular road lined with trees. The contrast between the lower town and the upper is that between ancient and modern, and forms part of the amenity which has made Brussels a favourite residence with the English abroad. On the whole, the working-classes occupy the lower town, the wealthier classes the upper.

EXERCISES.

How is Belgium bounded? What is its extent in square miles? What population does it contain? What are its divisions? What are the principal towns in West Flanders, East Flanders, Hainault? etc. Where are Dendermonde, Bruges, Brussels, Antwerp, Courtray, Louvain? etc. What are the principal rivers?

Between what degrees of latitude and longitude is Belgium situated? What are its length and breadth? What is its general aspect? Contrast the north-western districts with the south-eastern. Where is the most picturesque scenery to be found? Which provinces contain the great coal and iron field? In what respects does the climate of Belgium differ from that of southern England? In what centuries was the country now called Belgium the most industrial and commercial in Europe? What monuments of this pre-eminence remain in the larger towns?

What proportion of the population is employed in farming and in manufactures respectively? To what two causes is the great fertility of the soil ascribed? Describe the operation of trenching the ground in Flemish spade-husbandry. What crops are grown in Belgium besides those common in England? What three manufactured articles are named after people or places in Belgium? Of what industries are Verviers, Namur, and Liège respectively the seat? What of the foreign commerce and the navy of Belgium?

What two races and languages divide the population? Which of the two races is the more numerous? Where does the less numerous race prevail? How comes it that the Roman Catholic clergy manage most of the schools? Wherein does the university of Louvain differ from the others? Mention a fact showing that the attitude of the government towards churches is neutral. Describe the government of Belgium. In the line of what prince is the crown hereditary? Name the capital of Belgium. Mention one respect in which it is a little Paris. Wherein consists the difference between the lower town and the upper?

DESCRIPTIVE TABLE.

[illegible], a town in E. Flanders, on the Dender, with considerable manufactures and trade. Pop. 20,679.

Ant′werp (Fr. *Anvers*), a northern province, bounded on the west by the Schelde, contains 1122 square miles, with a population of 577,232.

Ant′werp (Fr. *Anvers*), the capital of the province of Antwerp, and the chief maritime and commercial city of Belgium, is situated on the Schelde; it has noble docks and an arsenal. Here Vandyke the celebrated painter was born in 1599. The paintings of Rubens adorn the cathedral, one of the finest Gothic edifices in Europe, being 500 feet in length by 250 in breadth, with a beautiful spire 366 feet high. Pop. 169,112.—51° 13′ N. lat. 4° 24′ E. long.

Ar′lon, the capital of Belgian Luxemburg. Pop. 4779.

Ath, a town of Hainault, on the Dender. Pop. 8260.

Bastogne, *bas-toyn'*, a town in Belgian Luxemburg. Pop. 2750.

Boom, a town in the province of Antwerp, on the Rupel. Pop. 10,064.

Bouil'lon, a town in Belgian Luxemburg, with a strong castle, on the Semoy, near the French frontier. Pop. 2760.

Brabant', South, an important central province, formerly distinguished from N. Brabant by the name of Austrian Brabant. It contains 1269 square miles. Pop. 985,274.

Bruges, *broo'jez*, Fr. pronunciation *Bruzh* (bridges), the capital of W. Flanders, 13 miles E. from Ostend; it carries on considerable trade, and is intersected by a number of canals. Pop. 44,501.—51, 12 N. 3, 14 E.

Brus'sels. *See* REMARKS, p. 127. Pop. 162,498.—50, 51 N. 4, 22 E.

Charleroi, *sharl-rwa'*, a town of Hainault, on the Sambre, surrounded by coal-mines. Pop. 16,000.

Courtray, *koor'tray*, a town in W. Flanders, on the Lys, celebrated for its manufactures of fine linens. Pop. 26,943.—50, 49 N. 3, 16 E.

Den'der, a small river which rises in Hainault, and joins the Schelde near Dendermonde.

Dendermon'de, or **Termon'de**, a town with a strong castle, in E. Flanders, at the confluence of the Dender and the Schelde. Pop. 8583.—51, 2 N. 4, 6 E.

Diest, *deest*, a town in S. Brabant, on the Demer, with manufactures of cloth. Pop. 7565.

Din'ant, a town in the province of Namur, on the Maas, with a strong citadel; near it are marble quarries. Pop. 6428.

Dixmude, *dix-mud'*, a town in West Flanders. Pop. 3926.

Dyle, *deel*, a small but navigable river in S. Brabant; after passing Louvain and Mechlin, it falls into the Schelde above Antwerp.

Eec'loo, a manufacturing town of E. Flanders. Pop. 10,400.

Enghien, *ang'ghe-ang'*, a town in Hainault. Pop. 3850.

Flan'ders, a very interesting and fertile quarter of Belgium, divided into the provinces of E. and W. Flanders. The extent of E. Flanders is 1232 square miles; its population 881,816. The extent of W. Flanders is 1512 square miles; its population 691,764.

Fleu'rus, a small town in Hainault, near the Sambre, the scene of four battles in the Spanish and French wars. Pop. 4093.

Fontenoy', a village in Hainault, near Tournay, where the allied armies of Britain, Austria, and Holland were defeated by the French under Marshal Saxe in 1745.

Ghent (Fr. *Gand*), a manufacturing and commercial city, the capital of E. Flanders, and the seat of a university, is situated on the Schelde, at its junction with the Lys. By these rivers and by navigable canals it is divided into 26 islands, which communicate by numerous bridges. It is 10 miles in circuit, great part of it being occupied with gardens, orchards, and fields. The Emperor Charles V. was born at Ghent in 1500. Pop. 131,431.—51, 3 N. 3, 43 E.

Gram'mont, a town in E. Flanders, on the Dender, with a good trade. Pop. 8861.

Hainault, *hain-o'*, a province stretching along the French frontier. Its superficial extent is 1474 square miles; its population 977,562. This province has, at different periods, been the scene of many of the most celebrated wars in the history of Europe.

Haine, a small river which falls into the Schelde at Condé.

Ham'me, a trading town in E. Flanders. Pop. 10,778.

Has'selt (the hazel grove), the capital of Belgian Limburg, on the Demer. Pop. 11,361.

Hers'tal, a town in Liège, on the Maas, with great iron and steel works. Pop. 7065.

Huy, *hoi*, sometimes *we*, a town in the province of Liège, on the Maas, with extensive iron-works and paper-mills. Pop. 11,774.

Liège, *le-aizh'*, a large province in the S.E. of the kingdom, having a superficial extent of 1144 square miles, and a population of 663,607.

Liège, the capital of the province of Liège, situated on the Maas, in a pleasant valley surrounded with cultivated hills. It is a flourishing town, with a university founded in 1816, and extensive manufactures, particularly in iron-work and clock-work. Pop. 123,131.—50, 40 N. 5, 31 E.

Lier, or **Lierre**, *le-air'*, a town in the province of Antwerp, at the junction of the two Nethes, with a considerable trade. Pop. 16,103.—51, 8 N. 4, 35 E.

Lim'burg, a province to the N. of

Liège and to the W. of Dutch Limburg. Area 946 sq. m.; pop. 210,851.

Lim'burg, a town in the province of Liège. Pop. 1797.

Lok'eren, a town in E. Flanders, between Ghent and Antwerp; it has a good corn trade and large manufactures. Pop. 17,400.—51, 6 N. 3, 59 E.

Louvain', a large town in S. Brabant, on the Dyle. Its walls are nearly 7 miles in circuit; but the space which they enclose is chiefly occupied by gardens and vineyards. Its long-celebrated university, founded in 1426, and suppressed by the French in 1793, was restored in 1817, and is again a flourishing school. Pop. 35,893.—50, 53 N. 4, 41 E.

Lux'emburg, a province to the S. of Liège. Area 1706 sq. m.; pop. 209,118.

Lys, a river which rises in the N. of France, passes Menin and Courtray, and joins the Schelde at Ghent.

Maas. *See* THE NETHERLANDS, p. 125.

Mech'lin (Fr. *Malines*), a city in the province of Antwerp, on the Dyle, with an ancient cathedral; it is noted for its manufactures of fine lace and linens. Pop. 42,381.—51, 1 N. 4, 28 E.

Men'in, a town of W. Flanders, on the Lys, with considerable manufactures. Pop. 11,337.

Mons, the capital of the province of Hainault, on the small river Trouille, in the neighbourhood of extensive coal-mines. It is strongly fortified, and is one of the principal barrier-towns against France. Pop. 24,310.—50, 26 N. 3, 58 E.

Namur, *na-moor'*, a province S. of Brabant, having a superficial extent of 1452 square miles, and a pop. of 322,620.

Namur, the capital of the above province, at the confluence of the Maas and the Sambre; it has extensive iron-works. Pop. 25,354.—50, 28 N. 4, 51 E.

Nieuport, *new'port* (new harbour), a fishing and trading town in W. Flanders. Pop. 3690.—51, 8 N. 2, 45 E.

Nivelles, *ne-vell'*, a town in South Brabant, with manufactures of lace and cambric. Pop. 9058.

Ostend' (at the east end or opening of the canal into the ocean), a seaport in West Flanders. It is famous for its obstinate defence against the Spaniards for more than three years, A.D. 1601-1604. Pop. 19,307.—51, 13 N. 2, 55 E.

Oudenar'de, a town in East Flanders, on the Schelde. Here the Duke of Marlborough and Prince Eugene gained a memorable battle over the French in 1708. Pop. 6262.—50, 52 N. 3, 36 E.

Ourthe, a river of Belgium, which joins the Maas at Liège.

Pop'eringen, a manufacturing town in West Flanders. Pop. 11,300.

Ram'illies, a village in South Brabant, where, in 1706, the Duke of Marlborough gained a signal victory over the French.

Renaix, *reh-nay'*, a town in East Flanders, near Oudenarde. Pop. 14,089.

Roulers, *roo-lay'*, a town in West Flanders, with considerable trade. Pop. 16,133.

St Hu'bert, a town in Belgian Luxemburg, with a celebrated abbey.

St Nicholas, *Nik'o-las*, a town in E. Flanders, with considerable manufactures. Pop. 25,698.—51, 9 N. 4, 8 E.

St Tron, an ancient town in the province of Limburg. Pop. 11,253.

Sambre, *sam'br*, a river which rises in the north of France, and falls into the Maas at Namur.

Schelde, *shel'deh*, a river which rises in France, near Cambrai, winds through East Flanders, passing Ghent and Antwerp, and falls into the North Sea by two mouths—the E. and W. Schelde.

Seraing', a town in Liège, with great iron-works. Pop. 27,407.

Soignies, *swan'ye*, a town in Hainault, with a large trade in hewn stone. Pop. 6900.

Spa, a town in the province of Liège, situated amid romantic scenery, long one of the most celebrated watering-places in Europe. Pop. 5900.—50, 30 N. 5, 52 E.

Thielt, *teelt*, a town in West Flanders. Pop. 10,300.

Thourout, *too-roo'*, a manufacturing town in West Flanders. Pop. 7916.

Tirlemont, *teerl'mong*, a town in South Brabant, on the Geete, with considerable woollen manufactures. Pop. 13,296.—50, 48 N. 4, 55 E.

Tongres, *tongr*, a town of Limburg. Pop. 6180.

Tournay, *toor-nay'*, a town in the province of Hainault, on the Schelde, with large manufactures of carpets and cloths. Pop. 32,566.—50, 36 N. 3, 24 E.

Turnhout, *toorn-hout'*, a manufacturing town in the province of Antwerp. Pop. 15,800.—51, 18 N. 4, 56 E.

Verviers, *ver-ve-a'*, a town in the

province of Liège, with considerable manufactures, particularly of woollen cloths. Pop. 44,944.—50, 38 N. 5, 54 E.

Waterloo', a village 10 miles S. of Brussels, where the most celebrated battle of modern times was gained by the Duke of Wellington over Napoleon I., on the 18th June 1815.—50, 43 N. 4, 22 E.

Ypres, *ee'p'r*, a town in West Flanders, situated on a small river. Pop. 16,500.—50, 51 N. 2, 53 E.

FRANCE

Is bounded N. by the Grand-duchy of Luxemburg, Belgium, and the English Channel; W. by the Atlantic Ocean; S. by the Pyrenees and the Mediterranean; E. by Italy, Switzerland, and the German Empire. It contains 204,090 square miles, and a population of 36,906,000.

Divisions.—The departments into which France is now divided are named after some river or other natural feature contained in them; but the old provinces are still frequently mentioned, and their names occur in historical and other works. Accordingly both are given in the subjoined table, the correspondence between the old provinces and the modern departments being also shown, as far as that can be done without detailed explanation.

Provinces.	Departments	Chief Towns.
Flanders	Nord	Lille, Douai, Cambrai, Dunkirk.
Artois	Pas de Calais	Arras, St Omer, Calais, Boulogne.
Picardy	Somme	Amiens, Abbeville.
	Lower Seine	Rouen, Dieppe, Havre.
	Eure	Evreux.
Normandy	Calvados	Caen.
	Manche	St Lô, Cherbourg.
	Orne	Alençon.
	Aisne	Laon, Soissons.
	Oise	Beauvais.
Isle of France	Seine and Oise	Versailles, St Germain.
	Seine	PARIS, St Denis.
	Seine and Marne	Melun, Fontainebleau.
Champagne	Ardennes	Mézières, Sedan.
	Marne	Châlons, Rheims.
	Aube	Troyes.
	Upper Marne	Chaumont.
Lorraine, Most of	Meuse	Bar-le-Duc, Verdun.
	Meurthe and Moselle	Nancy, Lunéville.
	Vosges	Epinal.
Alsace, Part of	Upper Rhine	Belfort.

Provinces.	Departments.	Chief Towns.
Franche-Comté	Upper Saône	Vesoul.
	Doubs	Besançon.
	Jura	Lons-le-Saulnier.
Burgundy	Yonne	Auxerre, Sens.
	Côte d'Or	Dijon.
	Saône and Loire	Mâcon, Autun.
	Ain	Bourg.
Orléanais	Eure and Loir	Chartres.
	Loiret	Orléans.
	Loir and Cher	Blois.
Maine	Mayenne	Laval, Mayenne.
	Sarthe	Le Mans.
Bretagne	Ille and Vilaine	Rennes, St Malo.
	Côtes du Nord	St Brieuc.
	Finistère	Quimper, Brest, Morlaix.
	Morbihan	Vannes, L'Orient.
	Lower Loire	Nantes.
Anjou	Maine and Loire	Angers, Saumur.
Touraine	Indre and Loire	Tours.
Berri	Cher	Bourges.
	Indre	Châteauroux.
Nivernais	Nièvre	Nevers.
Bourbonnais	Allier	Moulins.
Lyonnais	Rhône	Lyons.
	Loire	Montbrison, St Etienne.
Auvergne	Puy de Dôme	Clermont.
	Cantal	Aurillac.
La Marche	Creuse	Guéret.
Poitou	Vendée	Napoléon-Vendée.
	Deux Sèvres	Niort.
	Vienne	Poitiers.
Aunis, Saintonge	Lower Charente	La Rochelle, Rochefort, Saintes.
Angoumais	Charente	Angoulême, Cognac.
Limousin	Upper Vienne	Limoges.
	Corrèze	Tulle.
Guienne, Gascony	Dordogne	Périgueux.
	Gironde	Bordeaux.
	Lot	Cahors.
	Aveyron	Rodez.
	Tarn and Garonne	Montauban.
	Lot and Garonne	Agen.
	Landes	Mont-de-Marsan
	Gers	Auch.
	Upper Pyrenees	Tarbes, Bagnères.
Languedoc	Ardèche	Privas.
	Upper Loire	Le Puy.
	Lozère	Mende.
	Gard	Nîmes.
	Hérault	Montpellier.
	Tarn	Alby, Castres.
	Upper Garonne	Toulouse.
	Aude	Carcassonne, Narbonne.

Provinces.	Departments.	Chief Towns.
Dauphiny	Isère	Grenoble, Vienne.
	Drôme	Valence.
	Upper Alps	Gap.
Provence	Lower Alps	Digne.
	Var	Draguignan, Toulon.
	Mouths of the Rhône	Marseilles, Aix, Arles.
County of Avignon	Vaucluse	Avignon.
Roussillon	Eastern Pyrenees	Perpignan.
County of Foix	Ariège	Foix.
Béarn	Lower Pyrenees	Pau, Bayonne.
County of Nice	Maritime Alps	Nice.
Duchy of Savoy	Savoy	Chambery.
	Upper Savoy	L'Hopital.
Island of Corsica	Ajaccio	Bastia.

Islands.—Ushant, Belle Isle, Noirmoutier, Rhé, Oleron, Hières, Corsica.

Capes.—La Hagué, La Hogue, Barfleur.

Mountains.—Pyrenees, part of the Alps, Cevennes, Cantal, Puy de Dôme, Côte d'Or, Vosges, Mount Jura.

Rivers.—Somme, Seine, Loire, Charente, Garonne, Adour, Lower Rhône, and portions of the Moselle, Meuse, and Schelde.

Foreign Possessions.—In Asia, four stations on the coast of India, and one on the Hugli River, Cochin-China, and the protectorate of Cambodia; in Africa, Algeria, settlements on the Senegal and Gaboon rivers, the Ivory Coast, islands off the coast of Madagascar, one of the Comoro group, and Isle of Bourbon; in America, two small islands off Newfoundland, a number of islands in the West Indies, and Cayenne on the mainland of South America; in Oceania, New Caledonia, the Marquesas, Loyalty, and Society Islands, and three small protectorates. The possessions not styled protectorates in the above enumeration are called colonies, and are represented in both houses of the French Legislature, as if they formed an integral part of France.

REMARKS.

France lies between 42° 20′ and 51° 5′ N. lat., and between 4° 46′ W. and 7° 36′ E. long. Its length, from north to south, is 600 miles; its greatest breadth, from east to west, 510 miles.

France is compact in form, and has strong natural defences on all sides except the north; the Pyrenees separating it from Spain, the Alps from Italy, the Jura range from Switzerland, and the Vosges from part of the German Empire. Along the frontiers of

Belgium and the Grand-duchy of Luxemburg, and along the German frontier, where natural defences fail, almost every town is a fortress. The configuration of the interior is shown by the fact that only one river-basin, that of the Rhône and Saône, delivers its waters into the Mediterranean; all the others, Flanders and Lorraine being left out of account as belonging to the river-system of Belgium and Rhenish Prussia, deliver their waters into the Atlantic. The watershed between the Atlantic and the Mediterranean describes a curve from the south-west to the north-east of the country, touching the Pyrenees at one extremity and the Vosges at the other, and culminating in the Cevennes, several peaks of which near the sources of the Loire rise to a height of 5500 feet. In the centre of France, and detached from the great watershed, are the mountains of Auvergne, rising from a plateau 3000 feet high into summits approaching, and in Puy de Sancy exceeding, 6000 feet—a region of extinct craters and lava streams, with mineral waters, hot and cold. Puy de Sancy is the highest mountain in France away from the frontier-ranges, including which Mont Blanc is of course the highest; but the honour of possessing Mont Blanc is divided between France and Italy. Except in the neighbourhood of the frontier-ranges, among the Cevennes and Auvergne mountains, in Brittany and the hilly parts of Normandy, the surface of France is tame and uninteresting. In particular, not a single lake remarkable for either extent or beauty exists in France.

Placed in the middle of the temperate zone, France enjoys a fine climate, which varies, however, considerably from north to south, so as to admit of great variety of produce. The olive is characteristic of the south-east corner. North, or rather north-west of the Loire, the crops are the same as in England, with the addition of beetroot for sugar; while in the intermediate region vine-culture prevails, and maize competes with wheat. Fruit-trees are of great importance throughout France. Sweet chestnuts are a substitute for corn with the poorer classes among the Cevennes and Auvergne mountains; and the mulberry is extensively grown in the south-east, both for its fruit and for its leaves, the food of the silk-worm. Forests are valued for fuel, because of the limited amount and partial distribution of coal. The largest of the old forests, those of Ardennes, Compiègne, Fontainebleau, and Orleans, shelter foxes, wolves, and wild boars. Bears are found only in the Pyrenees and in the Alpine districts of Dauphiné. Within the present century, a forest of sea-pine, 100 miles long by 7 miles broad, has been planted along the Bay of Biscay in a region which used to afford only scanty pasturage to sheep. In the rearing of sheep and cattle, France is behind England, but far before her in the rearing of poultry; the eggs alone which France sends across the Channel are valued at £2,000,000 sterling. The law which ordains the equal division of the property of parents among all the children promotes the subdivision of the soil into small properties. There are now upwards of five million landed proprietors in France, one-half of

whom are unable, from poverty, to turn their small holdings of from £3 to £4 yearly value to good account.

France has only two important coal-fields, that of Valenciennes in the north, which is part of the great Belgian coal-field, and that of St Etienne near Lyons. Seams of iron-ore occur in these coal-fields, and are extensively worked; but the largest deposits of iron-ore lie too far away from coal to be utilized, and more than half of the iron-ore smelted in France is imported. Notwithstanding this disadvantage, the manufactures of France are extensive and varied. St Etienne is another Birmingham for the manufacture of arms; Lyons is the centre of a silk manufacture unequalled in the world for either extent or excellence; the cottons of Rouen, the woollens of Louviers and Rheims, the linens of Lille, compete with those of other countries. These centres of industry are all in or near one or other of the two great coal-fields. But apart from the coal-fields, minor centres of various manufactures exist. Langres, for instance, in the south-east corner of Champagne, and situated on the top of a steep hill, is famous for cutlery, and Limoges for porcelain; and on the Swiss frontier watchmaking is a staple employment.

PARIS, the capital of France, occupying both banks of the Seine, is the seat of many miscellaneous industries, the most characteristic products being jewellery and timepieces, mirrors and furniture, gloves and perfumery, dolls and toys. But its rank as second in population only to London among the cities of the world is due chiefly to its attractiveness as a residence, first to Frenchmen, then to foreigners more cosmopolitan than patriotic, who find their chief good in literature and art, in witty and elegant society, or in gaiety and luxury. Paris is the admiration of the world for its parks and gardens, its architectural monuments, its museums, galleries, and libraries. Almost the whole book-trade of France is centred in it, and its National Library is deemed the largest in existence. The supreme charm of Paris to Frenchmen appears in the proverbial division of them into those who inhabit Paris, and those whose ambition it is to do so. The population is accommodated on a comparatively small area by building high, most houses consisting of four stories, which are let out in flats and fractions of flats, as in Scotland; but a great improvement on the Scotch method is the arrangement whereby so great a number of families use the same entry, that it is worth while to establish in it a porter (*concierge*), who attends to the common stair, and in many other ways serves the tenants. The fashion of building high was a necessity when an increasing population had to be housed within the old fortifications, now the boulevards. The new fortifications consist, first, of a continuous line of works, and then of detached forts occupying commanding sites outside. These fortifications saved Paris from capture by force of arms in 1871, in which year the Germans starved the city into surrender by a five months' blockade.

French industry has the advantage of road and rail, of navigable river and canal, for inland communication, and of two seaboards

for foreign commerce. These seaboards, and all the great French rivers, are connected with one another by canals. The Loire, the longest of the rivers, is navigable to Roanne, 450 miles from its mouth; it is also the most destructive by overflowing its banks, on which account great works have been executed, especially between Blois and Angers, a distance of 90 miles, where a dike has been thrown up on either bank of such dimensions that the top of it forms a carriage-way. The foreign commerce of France is second only to that of the British Isles among European states; raw wool, raw cotton, and raw silk being the principal imports, woollen and silk goods and wines the principal exports. Not even one-half of the foreign commerce of France is carried on in French vessels, which implies an insufficient seafaring population. For the same reason, the fisheries are not extensive; the most important being that of sardines on the coasts of Brittany and Corsica. In the cultivation of the oyster, however, the French take the lead; the most extensive beds being those of Arcachon, in the department of the Gironde, though a finer quality is obtained from beds farther north.

The Celtic race, the fundamental element in the population of France, is nearly pure in Brittany, a name due to the multitude of Britons who found refuge there from the fury of the Saxon invaders of Britain in the fifth century. The natives of Brittany still speak a Celtic dialect. The Iberian race is nearly pure in Béarn, where Basque is still spoken. The Teutonic element is strongest in the north, where Franks and Norsemen settled, the latter giving name to Normandy, the former giving name first to a province and at length to the whole country. Flemish is still the language of the people in French as in Belgian Flanders. The Teutonic element is strong in the basin of the Rhône and Saône also, where the Burgundians settled. Everywhere else, the Celtic element, modified by the long-continued Roman occupation and by subsequent events, prevails. How effective the Roman occupation was appears from the fact that the French language is a daughter of the Latin. French writers are unequalled for clearness and piquancy of style; and, as if good taste were native to the race, the artificer is more frequently an artist in France than in any other country. In private life, the people are laborious and thrifty to a degree; in public life, their vain-glory and instability excite the wonder of the world. For a hundred years, the French nation has been making political, military, and social experiments on a colossal scale. At present, the government is republican. There is a Chamber of Deputies and a Senate, the members of both of which are elected, though not exactly by the same constituents; and the President, or head of the government, is elected for seven years, by a majority of votes, in a common meeting of the Chamber of Deputies and the Senate. The slow increase of population in France, as compared with other European countries, is the reason both why France cannot people her colonies with emigrants, and why foreign workmen are attracted in

great numbers to the large towns, particularly to Paris. In respect to religion, the government is neutral, paying salaries to Roman Catholic priests, Protestant ministers, and Jewish rabbis alike; but the great majority—98 per cent., it is supposed—of the population are, nominally at least, Roman Catholics. Schools of all grades, from the university to the primary school, are under the direction of a minister of State; but elementary instruction is still far from being universal, at any rate from being universally effective.

The large island of Corsica, politically belonging to France, is quite different physically, being mountainous throughout, with summits higher than any in the interior of France itself, the highest being Monte Rotondo, 9068 feet, near the centre of the island. Corsica has been occupied in succession by all the Powers that have been masters of the Mediterranean—Phœnicians, Carthaginians, Romans, Goths, Saracens, the Pope, Pisans, Genoese, and French. The produce is the same as that of the south-east corner of France; and the principal exports are olive-oil, chestnuts, and timber. The natives speak a sort of Italian; they are a mixed and indolent race, given to private vengeance.

The foreign possessions of France are described under Asia, Africa, America, and Oceania.

EXERCISES.

What are the boundaries of France? What is its extent in square miles? What population does it contain? What are its provinces? Into what departments have these provinces been divided? On what principle are the departments named? What are the principal towns of Picardy? of Normandy? etc. Name the chief islands of France—its capes—its mountains—its rivers. What are the foreign possessions of France in Asia, Africa, America, and Oceania respectively? Wherein does a French colony differ from a French protectorate? Where are Pau, Paris, Caen, Marseilles, Versailles, Narbonne, Dunkirk, Calais, La Rochelle, Agen? etc. Where are the Cevennes Mountains, La Hogue, the Seine, Noirmoutier, the Somme, Orne, Loire? etc.

Between what degrees of latitude and longitude is France situated? What are its length and breadth? Enumerate the natural defences of the country. Where do they fail, and how is the want of them supplied? What provinces belong to what foreign river-system? Trace the great watershed that determines the conformation of the interior. In what part of the watershed are the highest of the Cevennes Mountains to be found? Describe the mountains of Auvergne. In what sense is Puy de Sancy the highest mountain in France? What country shares Mont Blanc with France? With what exceptions is the interior of France tame and uninteresting? What natural feature is wanting in French landscapes?

What productions belong respectively to the three climatic regions of France? In which of them is the mulberry grown, and for what purpose? If the three climatic regions were marked off by two lines, in what direction would the lines run? In what districts are chestnuts a

substitute for corn? Name the four great forests of France. What wild animals find shelter there? Where only are bears found? What forest has been formed within the present century? In rearing what kind of live-stock is France superior to England? Mention a remarkable fact in illustration of that superiority. What law promotes the subdivision of the land into small properties? What disadvantage attends extreme subdivision of the land?

Where are the two great coal-fields of France? What proportion of the iron smelted in France is imported? Name the chief seats of the woollen, cotton, linen, and silk manufactures. In which of these manufactures does France excel all other nations? What town is the French Birmingham in respect of the manufacture of arms? What towns are famed respectively for cutlery and porcelain? Where does watch-making employ the population?

Name the capital of France. Where is it situated? What is its rank among great cities in respect of population? Mention characteristic products of its miscellaneous industries. To what is the greatness of its population chiefly due? What attracts foreigners to Paris? Quote a proverbial saying based on the supreme charm which Paris exercises over Frenchmen. What of its book-trade and its National Library? How did the custom of building high originate? Wherein does the Parisian mode of occupying high houses agree with the Scotch method? What improvement on the Scotch method prevails in Paris? Describe the present fortifications of Paris. How long did they enable the city to hold out against the Germans in 1871?

What three additions has man made to the natural means of communication possessed by France? What desirable result has been achieved by the canals? Give an account of the Loire as a waterway and as a destructive force. What rank does France hold among European states in respect of foreign commerce? What are the principal imports and exports? How comes it that French goods are to a large extent carried in foreign ships? Which one of the French fisheries is the most important, and where is it carried on? Where are the most extensive oyster-beds?

What race forms the basis of the population? Where are the Celtic and Iberian races found nearly pure? Where is the Teutonic element strongest? In what three districts are non-French languages still spoken? Account for the names Brittany, Normandy, and France. What fact shows how effective had been the Roman occupation of the country? Wherein do French writers and French workmen respectively excel? What contrast is presented by the people, according as their private or their public life is considered? Describe the present republican constitution of France. Mention two results of the slow increase of the population. What fact shows the neutral attitude of the government to religions? What proportion of the population is professedly Roman Catholic? How are the schools managed?

Contrast the surface of Corsica with that of France. Of what nature is its produce? Name the three principal exports. What is the language of the natives, and what their character? Enumerate the powers which have in succession occupied Corsica.

DESCRIPTIVE TABLE.

Abbeville, *ab'veel*, a manufacturing town in the department of Somme, on the river of that name. Pop. 19,283.—50° 7′ N. lat. 1° 50′ E. long.

Adour, *â-door'* * (the water), a river which rises in the Pyrenees, and flows into the Bay of Biscay below Bayonne.

Agde, *agd* (good), a seaport and fortress in the department of Hérault, near the mouth of the Canal du Midi. Pop. 7767.

Agen, *â-zhang'*, the capital of the department of Lot and Garonne. In the vicinity there is a beautiful view over the rich valley of the Garonne, with the Pyrenees in the distance. Pop. 18,743.

Agincourt, *â-zheng-koor'*, a village in the department of Pas de Calais, famous for the great victory gained over the French by Henry V. of England on the 25th October 1415.

Am, *ang*, a river which rises in Mount Jura, and falls into the Rhône above Lyons.

Aisne, *ain*, a river which rises on the borders of Lorraine, and, passing Soissons, joins the Oise near Compiègne.

Aix (waters), a city in the department of Mouths of the Rhône, founded by the Romans 123 B.C., who named it *Aquæ Sextiæ*, from its celebrated hot springs; it has considerable trade and manufactures. Pop. 23,887.—43, 32 N. 5, 27 E.

Ajaccio, *â-yatch'o*, a seaport, the capital of Corsica, and the birthplace of Napoleon Bonaparte in 1769. Pop. 17,327.—41, 55 N. 8, 44 E.

Alais, *â-lā*,† a town in the department of Gard, at the foot of the Cevennes. It has a large trade in raw and dressed silk, with extensive iron-works. Pop. 17,598.

Al'bi, an ancient city, the capital of the department of Tarn, with a fine cathedral. Pop. 16,914.

Alençon, *â-lang'song*, the capital of the department of Orne, on the Sarthe; it has extensive manufactures. Pop. 15,939.—48, 25 N. 0, 6 E.

Allier, *al'le-ā*, a river which rises in the Cevennes, flows northward, and, passing Moulins, enters the Loire below Nevers.

Ambert, *ang'bair*, a town in the department of Puy de Dôme, in the fine valley of the Dore, celebrated for its paper manufactures. Pop. 3940.

Amiens, *am-e-ang'*, the *Samarobriva* of the Romans, the capital of the department of Somme, with considerable manufactures. Its cathedral is a noble edifice. Here was concluded a short-lived treaty of peace, in 1802, between Britain and France. Pop. 67,874.—49, 53 N. 2, 18 E.

Angers, *ang-zhā'*, the capital of the department of Maine and Loire, near the junction of the Sarthe and Mayenne; it has a considerable trade. Pop. 65,331.—47, 28 N. 0, 33 W.

Angouleme, *ang-goo-laim'*, the capital of the department of Charente, in a beautiful valley, through which flows the Charente. It is celebrated for its paper manufactures. Pop. 30,799.—45, 39 N. 0, 10 E.

Angoumais, *ang-goo-mā'*, a former province in the west of the country.

Anjou, *ang'zhoo*, a former province south-east of Bretagne.

Annonay', a thriving manufacturing town in the department of Ardèche. Pop. 14,891.

Ariege, *â-re-aizh'*, a river which has its source in the Pyrenees, passes Foix, and falls into the Garonne near Toulouse.

Arles (on the marshy land), the ancient *Arelate*, a city in the department of Mouths of the Rhône. Pop. 14,431.

Ar'ras, the ancient *Nemetacum*, the capital of the department of Pas-de-Calais, on the Scarpe. It was long famous for its manufacture of tapestry, which hence took the name of *arras*. Pop. 27,041.—50, 17 N. 2, 46 E.

Artois, *ar-twâ'*, a former province in the north of the country.

Auch, *osh*, the capital of the department of Gers; it has an ancient cathedral. Pop. 12,175.

Aurillac, *o-reel'yak*, the capital of the department of Cantal, on the Jordanne. Pop. 12,860.

Autun, *o-tung'*, the ancient *Bibracte* and *Augustodunum*, a city in the department of Saône and Loire, containing numerous remains of Roman art. Pop. 12,502.

Auvergne, *o-vairn'* (the high country), an old province in the interior.

Auxerre, *o-zair'*, capital of the de-

* *â* sounds like the *a* in *far*.

† *ā* sounds like the *a* in *fate*.

partment of Yonne, surrounded by extensive vineyards. Pop. 16,393.

Auxonne, *os-son'*, a fortified town in the department of Côte d'Or, on the Saône, with an arsenal, military school, and cannon foundry. Pop. 5249.

Aveyron, *ā-vā'rong*, a river which rises in the Cevennes, and, flowing W., joins the Tarn below Montauban.

Avignon, *ā-veen-yong'*, an old province in the S.E.

Avignon (on the water), capital of the department of Vaucluse, on the Rhône, in a rich and fruitful plain. Near it is the celebrated fountain of Vaucluse, hallowed by the names of Petrarch and Laura. Avignon was the residence of the Popes from 1309 to 1377, and it continued to belong to them until 1791, when it was annexed to France. Pop. 32.440.

Avranches, *av-rangsh'*, a town in the department of Manche, delightfully situated on the side of a hill about two miles from the sea. Pop. 7889.

Bagneres de Bigorre, *ban-yair' d' be-gor'*, a town in the department of Upper Pyrenees, on the Adour, celebrated for its mineral waters and warm baths. Pop. 7634.

Barèges, *bar-raizh'*, a village about 12 miles S. of Bagnères, famed for its mineral hot springs.

Bar'fleur, a promontory and small seaport on the coast of the department of Manche.—49, 42 N. 1, 16 W.

Bar-le-Duc, the capital of the department of Meuse, on the Ornain; the neighbouring country is celebrated for its wine. Pop. 17,421.

Basque Roads, *bask*, off the coast of Charente, between the isle of Oleron, La Rochelle, and Rochefort.

Bas'tia, a seaport in Corsica, with a strong castle. Pop. 19,696.—42, 41 N. 9, 27 E.

Bayeux, *bā-yu'*, a town in the department of Calvados, with a fine cathedral, in which is preserved a roll of tapestry, said to be the work of Matilda, wife of William the Conqueror, representing the progress and termination of the eventful contest between her husband and Harold. Pop. 8006.

Bayonne', a seaport and fortress in the department of Lower Pyrenees, at the confluence of the Nive and the Adour, four miles from the Bay of Biscay. Pop. 20,957.—43, 29 N. 1, 28 W.

Béarn', a former province in the S.W.

Beaucaire, *bo-kair'*, a town in the department of Gard, on the Rhône, which is here spanned by a fine suspension bridge; its annual fair is one of the greatest in Europe. Pop. 8309.

Beaune, *bone*, a town in the department of Côte d'Or, famed for its wine. Pop. 11,449.

Beauvais, *bo-vā*, the ancient *Cæsaromagus*, a thriving town, capital of the department of Oise; it has a fine cathedral. Pop. 17,516.

Belfort, *bel-for'*, a territory and strong town on a tributary of the Doubs, occupying the small portion of Alsace not ceded to Germany in 1871. Pop. 33,122.

Belleisle-en-Mer, *bel-eel'-ang-mair* (beautiful island in the sea), an island in the Atlantic, department of Morbihan. Pop. 9900.—47, 16 N. 3, 13 W.

Ber'nard, Little St, one of the Graian Alps in Savoy, by which it is supposed Hannibal passed into Italy.

Ber'ri, a former province in the interior.

Besançon, *bez-ang-song'*, the *Vesontio* of the Romans, a handsome fortified city, capital of the department of Doubs, with extensive trade and manufactures. Pop. 47,332.—47, 13 N. 6, 2 E.

Beziers, *bā-ze-ā'*, an ancient city of the department of Hérault, on the Orb, near the Royal Canal, the centre of a considerable trade. Pop. 41,249.

Blanc, Mont, *mong blang*, on the borders of Savoy and Piedmont, the highest mountain of Europe, exhibiting all the grandeur and desolation of Alpine scenery. Its summit is 15,760 feet above the sea.

Blois, *blwa*, the capital of the department of Loir and Cher, on the Loire, overhanging which is the celebrated castle of Blois. Pop. 18,409.—47, 35 N. 1, 20 E.

Bordeaux, *bor-do'*, the *Burdigala* of the ancients, one of the most opulent and elegant cities in France, capital of the department of Gironde, situated on the Garonne. The commerce of Bordeaux is very extensive, its great articles of export being wines, brandies, and fruits. Pop. 217,990.—44, 50, N. 0, 34 W.

Boulogne, *boo-loyn'*, a seaport in the department of Pas-de-Calais; a place of great resort for English families. Pop. 44,842.—50, 44 N. 1, 37 E

Bourbonnais, *boor-bon'nā*, a former province in the interior of the country.

Bour'bon-Vendée. *See* **La Roche-sur-Yon.**

Bourg, the capital of the depart-

ment of Ain, near which are a stately church and mausoleum. Pop. 15,957.

Bourges, *boorzh*, the ancient *Avaricum*, the capital of the department of Cher, at the confluence of the Auron and the Yèvre, with a noble cathedral. Pop. 35,338.

Brest, a strongly fortified seaport in the department of Finistère, the chief naval station of France, on the Atlantic, with an excellent harbour, arsenal, and docks. P. 69,110.—48, 23 N. 4, 29 W.

Bretagne, *breh-tan'*, or **Brit'tany**, an old province in the N.W.

Briançon, *bre-ang-song'*, a strongly fortified town in the department of Upper Alps, on the Durance. Pop. 3063.

Brive, *breev*, a town in the department of Corrèze, in a fertile valley on the river of that name. Pop. 11,620.

Bur'gundy (Fr. *Bourgogne*), an old province in the E., celebrated for its wines.

Caen, *kang*, a commercial city and capital of the department of Calvados, on the Orne, which is navigable for vessels of 200 tons. The houses are built of a white stone, which is exported to great distances because of its beauty. The city contains several fine old edifices, and is the seat of a university. Here William the Conqueror was buried. Pop. 39,658.—49, 11 N. 0, 21 W.

Cahors, *ka-or'*, the capital of the department of Lot; the neighbouring country produces excellent wine. Pop. 14,100.

Calais, *kal'is*, Fr. pronunciation *ka'lā*, a strong seaport in the department of Pas-de-Calais, nearly opposite Dover in England, to which packets sail regularly. After a memorable siege, it surrendered to Edward III. in 1347, and remained in the possession of the English till 1558, when it was taken by the Duke of Guise. Pop. 13,529.—50, 57 N. 1, 51 E.

Calvados', a maritime department in the N.W., forming part of the old province of Lower Normandy. It takes its name from a reef of rocks on the coast called Calvados, after one of the ships of the Spanish Armada, which was wrecked there. Pop. 439,830.

Cam'brai, an ancient city in the department of Nord, long famed for the manufacture of *cambric*. Pop. 17,875.—50, 10 N. 3, 13 E.

Cannes, *kan*, a seaport in the department of Maritime Alps, much frequented by English visitors. Pop. 14,412.

Cantal', a chain of mountains in the department of Cantal, of which the *Plomb de Cantal* is 6200 and the *Puy de Sancy* 6224 feet high.

Carcassonne, *kar-ka-sonn'*, the capital of the department of Aude, with manufactures of cloth. Pop. 24,194.

Castres, *kas'tr*, a town in the department of Tarn, on the Agout, the seat of considerable manufactures. Pop. 22,056.

Cette, *set*, a fortified seaport in the department of Hérault, on an inlet of the Gulf of Lions, with a flourishing trade. Pop. 34,716.—43, 24 N. 3, 42 E.

Cevennes, *sā-ven'*, a chain of mountains in the S. of France, remarkable as the retreat of the persecuted Protestants in the 17th century.

Chalons-sur-Marne, *sha-long'-sur-marn*, an ancient town and capital of the department of Marne. Pop. 23,192.

Chalon-sur-Saône, *sha-long'-sur-sone*, a town in the department of Saône and Loire, situated at the entrance of the central canal which unites the Saône and the Loire. Pop. 21,156.

Chambery, *sham-bā-re'* (on the bend of the water), an episcopal city and capital of the ancient duchy of Savoy, ceded in 1860 by Sardinia to France, to which it belonged from 1792 to 1815, when Chambery was the capital of the department of Mont Blanc. It is now the capital of the department of Savoy. Pop. 18,157.—45, 39 N. 6, 51 E.

Chamouni, or **Chamounix**, *sha'-moo-ne*, a celebrated valley in Savoy, at the foot of Mont Blanc.

Champagne, *sham-pain'*, an old province in the N.E., celebrated for the wine to which it gives name.

Chantilly, *shan-til'le* or *shang-tee-ye'* (the head of the water source), a pretty town, department of Oise, on the Nonette, a principal centre of the lace manufacture, celebrated for its royal palace and park, and magnificent gardens and waterworks. Pop. 3942.

Charente, *sha-rangt'* (the winding river), a river which rises in Upper Vienne, and, flowing by a very circuitous course, passes Cognac and Saintes, and falls into the Bay of Biscay below Rochefort.

Charleville, *shar-le-veel'*, a town in the department of Ardennes, on the Meuse, with a manufacture of arms and considerable trade. Pop. 15,206.

Chartres, *shar't'r*, the capital of the department of Eure and Loir, situated on the Eure, with a noble cathedral. Pop, 20,692.

Chateauroux, *sha-to-roo',* the capital of the department of Indre, with large woollen manufactures. Pop. 18,741.

Chatelleraunlt, *sha-tel-ro',* a town in the department of Vienne, noted for its cutlery and arms. Pop. 14,864.

Chaumont, *sho-mong'* (bald hill), the capital of the department of Upper Marne. Pop. 11,670.

Cher, *shair,* a river which rises in the mountains of Auvergne, washes St Amand, and flows into the Loire near Tours.

Cherbourg, *sher'boorg,* an important seaport, arsenal, and strong fortress, in the department of Manche, between Capes La Hogue and Barfleur. Pop. 35,691.—49, 38 N. 1, 37 W.

Cholet, *sho-lā',* a town in the department of Maine and Loire, famed for its cambric manufactures. Pop. 13,921.

Clermont, *kler-mong',* the capital of the department of Puy de Dôme. It is the birthplace of Pascal and the seat of a college, and has considerable trade. Pop. 38,103.—45, 46 N. 3, 5 E.

Cognac, *kon-yak',* a town in the department of Charente, on the river of that name, famed for its brandy. Pop. 13,317.

Collioure, *kol-le-oor',* a fortified seaport town in the department of Eastern Pyrenees, on the Mediterranean. It is defended by three forts. Pop. 3499.

Compiegne, *kong-pe-ain',* a town in the department of Oise, near the junction of the Oise with the Aisne, 45 miles N. of Paris, with a royal palace. Pop. 13,567.

Con'dé, a strong frontier fortress in the department of Nord, on the Schelde. Pop. 3516.

Condom, *kong-dong',* a town in the department of Gers, on the Baise, with a good trade in wine and flour. Pop. 5625.

Cor'sica. Pop. 272,639. *See* REMARKS, p. 137.

Coutances, *koo-tangss',* a seaport in the department of Manche, with a fine cathedral. Pop. 8187.

Cres'sy, or Cre'cy, a village in the department of Somme, to the north of Abbeville, memorable for the great victory gained by Edward III. over the French in 1346. Pop. 1385.

Creuzot, Le, *leh kruz'o,* a town in the department of Saône and Loire, noted for its extensive iron-works and coal-mines. Pop. 16,006.

Dauphiny, *da'fe-nā,* an old frontier province in the S.E., bounded by the Alps.

Dax, the *Aquæ* of the Romans, a town in the department of Landes, on the Adour, with a strong castle; it is famed for its hot mineral springs. Pop. 9005.

Dieppe, *de-epp',* a seaport in the department of Lower Seine, between which and England there is a regular intercourse by steam-vessels. Pop. 21,585.—49, 55 N. 1, 5 E.

Digne, *deen,* the capital of the department of Lower Alps, on the Bleone, a tributary of the Durance. Pop. 5252.

Dijon, *de-zhong',* the capital of the department of Côte d'Or, in a fertile plain. It has many fine buildings, and is the seat of a university. Bossuet and Crebillon were natives of Dijon. Pop. 52,115.—47, 19 N. 5, 2 E.

Dinan, *de-nang'* (the fortress), a town in the department of Côtes du Nord, on the Rance, much frequented for its mineral waters. Pop. 9830.

Dôle (the valley), an ancient town in the d[illegible] Doubs, and on the canal uniting the Rhône with the Rhine. Pop. 11,561.

Dordogne, *dor-doyn',* a large river which rises in the mountains of Auvergne, and joins the Garonne below Bordeaux.

Dou'ai, a fortified town in the department of Nord, on the Scarpe, the seat of a university, with a large arsenal and foundry for cannon. Pop. 25,060.—50, 22 N. 3, 4 E.

Draguignan, *dra-geen'yang,* the capital of the department of Var, surrounded by an amphitheatre of hills. Pop. 7831.

Dreux, *dru,* an ancient town, department of Eure and Loir, with a costly chapel erected by Louis Philippe. Pop. 7454.

Dun'kirk (*Fr.* Dunkerque), a fortified seaport in the department of Nord, with an excellent roadstead. Pop. 37,307.—51, 2 N. 2, 23 E.

Durance, *du-rangss'* (water), a rapid river rising in Mount Genèvre, and discharging itself into the Rhône near Avignon. It is the *Druentia* of the Romans, which Hannibal crossed in his march to the passage of the Alps.

Elbeuf, a town in the department of Lower Seine, the principal seat of the French woollen manufactures. Pop. 22,883.

Em'brun, a town with a strong citadel, in the department of Upper Alps, on the Durance. Pop. 3283.

Epinal', the capital of the depart-

ment of Vosges, on the Moselle. Pop. 15,161.

Evreux, *ev-ru'*, an ancient town and capital of the department of Eure; it is situated on the Iton, in a fertile valley, and has considerable trade. Pop. 12,573.

Falaise', a manufacturing town in the department of Calvados, the birthplace of William the Conqueror; here is a strong castle. Pop. 8201.

Fecamp, *fā-kang'* (the field of tribute), a seaport in the department of Lower Seine. Pop. 11,919.

Foix, *fwa*, the capital of the department of Ariège. Pop. 5577.

Fontainebleau, *fong-tain-blo'*, a town in the department of Seine and Marne, 35 miles S.E. of Paris, surrounded by a forest of 40,620 acres; its royal palace was a favourite residence of Napoleon I. Pop. 12,370.

France, Isle of, an old province, now forming the departments of Oise, Seine, Seine and Oise, and Seine and Marne.

Franche-Comté, *frangsh-kong-tā'*, an old province on the borders of Switzerland.

Gap, the capital of the department of Upper Alps, in a deep valley among mountains. Pop. 8718.

Gard, a river which rises in the Cevennes, and flows into the Rhône near Beaucaire.

Garonne' (rough stream), a large river which rises in the Pyrenees, and traverses the S.W. region of the country; below Bordeaux it receives the Dordogne, when it takes the name of the Gironde.

Gas'cony (*Fr.* **Gascogne**), an old province in the S.W.

Gers, *zhair*, a river which rises in the Pyrenees, and, flowing northward, falls into the Garonne above Agen.

Gironde, *zhe-rongd'*, a river or estuary formed by the junction of the Garonne and Dordogne, discharging its waters into the Atlantic after a course of 45 miles.

Givet, *zhe-vā'*, a strong frontier fortress in the department of Ardennes, on the Meuse. Pop. 6594.

Granville, *grang-veel'*, a fortified seaport in the department of Manche, with a good trade in the fisheries. Pop. 10,920.

Grasse, a town in the department of the Maritime Alps, on the declivity of a hill, surrounded by rich fields and gardens. Pop. 8342.

Gravelines, *grav-leen'* (the count's corner), a strong seaport in the department of Nord. Pop. 4255.

Gray, a town in the department of Upper Saône. Pop. 7185.

Greno'ble, a fortified town and capital of the department of Isère, famous for its manufacture of gloves. Pop. 48,485.—45, 12 N. 5, 43 E.

Gueret, *gā-rā'*, the capital of the department of Creuse. Pop. 5864.

Guienne, *ghe-en'*, an old province in the S.W.

Harfleur', a seaport town in the department of Lower Seine. Pop. 2081.

Havre, Le, *leh hav'r*, or **Havre de Grace**, *hav'r deh grass*, a seaport in the department of Lower Seine, at the mouth of the Seine. Pop. 105,540.

Hazebrouck, *haz'brook*, a manufacturing town in the department of Nord, on the Bourre. Pop. 6975.

Hières, *e-air'*, a cluster of islets in the Mediterranean, S.E. of Toulon.

Hon'fleur, a seaport in the department of Calvados, at the mouth of the Seine. Pop. 9136.

Isère, *e-zair'*, a rapid river which rises in the Alps, passes Grenoble, and falls into the Rhône above Valence.

Issou'dun, a manufacturing town in Berri, department of Indre. Pop. 12,819.

Ju'ra, Mount, a chain of mountains between France and Switzerland; the highest peak is 6588 feet above the sea.

La Crau, *kro*, a remarkable stony plain occupying the western part of the department of the Mouths of the Rhône.

La Flèche, a town in the department of Sarthe, on the Loir, noted for its military school founded by Napoleon I. Pop. 7529.

La Hague, *haig*, a cape in the N.W. extremity of the peninsula of Cotentin, department of Manche.

La Hogue, *hog*, a cape in the N.W. of the department of Manche.—49, 43 N. 1, 57 W.

La Marche, *marsh* (the frontier), a former province between Poitou and Auvergne.

Landrecies, *lang-dreh-se'*, a town in the department of Nord, on the Sambre. Pop. 3794.

Langres, *lang'r*, an ancient town in the department of Upper Marne, near the sources of the Marne; it is noted for its cutlery. Pop. 10,321.

Languedoc', an old province in the south, celebrated for its fine climate and fertile plains.

Languedoc′, The Canal of, extends from the Mediterranean to Toulouse, where it enters the Garonne, forming an inland navigation from sea to sea. It is 150 miles long, and cost more than £1,300,000.

Laon, *lâ-ong′*, a town in the Isle of France, capital of the department of Aisne. Pop. 12,445.

La Roche-sur-Yon, the capital of the department of Vendée; it was formerly known as Napoléon-Vendée and Bourbon-Vendée. Pop. 9965.

La Rochelle, *ro-shell′* (the little fort on the rock), a fortified seaport in the department of Lower Charente, of which it is the capital; its trade is considerable. Pop. 20,028.—46, 9 N. 1, 9 W.

Laval, *lâ-vâl′*, a town in the department of Mayenne, of which it is the capital. Pop. 27,810.

Le Mangs, *leh mang*, a manufacturing town in the department of Sarthe, of which it is the capital. Pop. 49,155.

Le Puy, *leh pwee*, the capital of the department of Upper Loire, situated in a picturesque valley. Pop. 18,567.

Lille, or Lisle, *leel*, a flourishing city and capital of the department of Nord, and one of the strongest fortresses in Europe. It has extensive trade and manufactures. Pop. 145,113. —50, 38 N. 3, 4 E.

Limoges, *le-mozh′*, the capital of the department of Upper Vienne, with woollen and porcelain manufactures. Pop. 59,338.

Limousin, *le-moo-zeng′*, a former province in the interior, W. of Auvergne.

Lisieux, *le-ze-*u′,* a thriving manufacturing town in the department of Calvados, on the Touque. Pop. 16,039.

Lodève, *lo-daiv′*, a fortified town in the department of Hérault, at the foot of the Cevennes, with great cloth manufactures. Pop. 9895.

Loir, *lwar*, a large river which has its source in the Cevennes, and traverses the central region of the country. Its course is N.W. to Orléans; thence, flowing westwards, it discharges itself into the Atlantic below Nantes.

Lons-le-Saunier, *long-leh-so-ne-ā′* (named from its salt-works, to which the town owes its celebrity), the capital of the department of Jura, situated in the midst of lofty mountains. Pop. 12,101.

Lorient, *lo-re-ang′* (the east), a fortified town in the department of Morbihan, with a royal arsenal and dockyard. Pop. 37,096.—47, 44 N. 3, 21 W.

Lorraine′, a former province in the N.E., bounded on the N. by the grand-duchy of Luxemburg.

Loudeac, *loo-dā-ak′*, a town in the department of Côtes du Nord. Pop. 2137.

Louviers, *loo-ve-ā′*, a flourishing town in the department of Eure, noted for its manufacture of fine cloths. Pop. 9990.

Luneville, *loo-nā-veel′*, a town in the department of Meurthe and Moselle, with a military school. Pop. 17,560.

Lyonnais, *le-on′nā*, a former province in the S.E., separated from Dauphiny by the Rhône.

Lyons (*Fr.* **Lyon**), a city and capital of the department of Rhône, at the confluence of the Rhône and Saône. It is, in point of wealth, the second city in France, and is distinguished for its extensive manufactures of silk and other rich fabrics. Lyons, the *Lugdunum* of the ancients, was early an important place, and still shows several remains of Roman magnificence. Pop. 347,619.—45, 45 N. 4, 49 E.

Macon, *mâ-kong′*, the capital of the department of Saône and Loire, noted for its excellent wine. Pop. 18,412.

Maine, a former province in the W., bounded on the N. by Normandy.

Marne, a large river which rises S. of Langres, passes Saint-Didier, and enters the Seine at Charenton, near Paris.

Marseilles (*Fr.* **Marseille**), the ancient *Massilia*, a flourishing commercial city and seaport on the Mediterranean, capital of the department of Mouths of the Rhône, and the great emporium of trade to the Levant. Pop. 269,340.—43, 17 N. 5, 22 E.

Maubeuge, *mo-buzh′*, a fortified frontier town in the department of Nord, on the Sambre. Pop. 5360.

Mayenne′, a river which rises in Normandy, passes Angers, and falls into the Loire.

Mayenne, *mā-enn′*, a town in the department of Mayenne. Pop. 9945.

Meaux, *mo*, a town in the department of Seine and Marne. Pop. 12,525.

Melun, *m′lung′* or *meh-lung′*, a town in the Isle of France, capital of the department of Seine and Marne. Pop. 12,116.

* u in Roman type, in conjunction with Italic, has the sound of *u* in the Scotch word *schule*, for school.

Mende, *mangd,* a manufacturing town in the department of Lozère, of which it is the capital. Pop. 6091.

Menton (*Ital.* **Mentoné**), a town in the department of the Maritime Alps, 12 miles E.N.E. of Nice. Its mild climate attracts to it a large number of invalids. Pop. 9129.

Merville′, or **Merghem′,** the ancient *Menariacum,* a town in the department of Nord, on the Lys, 18 miles W. of Lille. Pop. 3202.

Meuse, *muz,* a large river which rises in Upper Marne, and, flowing northward, passes through Belgium and the S. of Holland, and falls into the North Sea below Rotterdam.

Mézières, *mez-e-air′,* a strong frontier-town, capital of the department of Ardennes, on the Meuse. Pop. 6008.

Monaco, *mon′ā-ko,* a town and small independent principality, 18 miles E.N.E. of Nice. Pop. of town, 2863; of principality, 7049.

Montauban, *mong-tō-bang′* (the hill of Albanus), a handsome manufacturing town, capital of the department of Tarn and Garonne, beautifully situated on the Tarn, and distinguished for its Protestant seminary. Pop. 20,840.—44, 1 N. 1, 21 E.

Montbrison, *mong-bre-zong′,* a town in the department of Loire, of which it is the capital. Pop. 6581.

Mont-de-Marsan, *mong-deh-mar-sang′,* a town and capital of the department of Landes, on the Midouze. Pop. 9832.

Monte′limar, a town in the department of Drôme, on the Rhône. Pop. 10,240.

Montpellier, *mong-pel-le-ā′,* an ancient town, capital of the department of Hérault, famed for its pure air and mild climate. It was early the seat of a celebrated medical school, and has considerable trade and manufactures. Pop. 52,673.

Morlaix, *mor-lā′* (the place on the sea-shore), a town in the department of Finistère, with considerable trade. Pop. 13,788.—48, 34 N. 3, 50 W.

Moselle′, a river which rises in the Vosges Mountains, and, flowing northward, passes Toul and Pont-a-Mousson; entering Germany at the N.W. corner of the territory of Alsace-Lorraine, it separates Luxemburg from Rhenish Prussia, and falls into the Rhine at Coblentz.

Moulins, *moo-leng′* (the mills), a town, capital of the department of Allier. Pop. 20,446.

Nancy, *nang-se′* (the valley dwellings), an elegant city, capital of the department of Meurthe and Moselle. Its gates are like triumphal arches, and the Royal Square, built by Stanislaus, King of Poland, is adorned with beautiful fountains. Pop. 73,208.—48, 41 N. 6, 11 E.

Nantes, *nangt,* the ancient *Condivicnum,* a large commercial city and seaport, capital of the department of Lower Loire, about 30 miles from the mouth of the Loire. The Edict of Nantes, granting toleration to the Protestants in France, was issued by Henry IV. in 1598, and revoked by Louis IV. in 1685. Pop. 117,555.—47, 13 N. 1, 33 W.

Napoléon-Vendée. *See* **La Roche-sur-Yon.**

Narbonne′, an ancient city in the department of Aude, with a fine cathedral. Pop. 25,635.

Nevers, *neh-vair′* (the new fort on the Nièvre), a town, capital of the department of Nièvre, at the junction of the Nièvre and Loire, celebrated for its enamel, porcelain, and iron works. Pop. 21,722.

Nice, *neess,* a province on the Mediterranean, ceded in 1860 by Sardinia to France. Along with portions of the department of Var, it was erected into the department of the Maritime Alps.

Nice, *neess,* an ancient city and seaport, capital of the department of the Maritime Alps, beautifully situated at the mouth of the Paglion. It is celebrated for its mild climate. It belonged to France from 1792 to 1814, and was again ceded to France by Sardinia in 1860. Pop. 54,953.—43, 42 N. 7, 17 E.

Nimes, or **Nismes,** *neem′* (the sacred grove), the ancient *Nemausus,* a city in the department of Gard, of which it is the capital. It is situated in a fertile vale, encompassed by hills, and contains several interesting remains of Roman art, such as the house called the *Maison Carrée,* an amphitheatre, etc. It has also extensive manufactures of silks, ribbons, etc. Pop. 61,210.—43, 50 N. 4, 21 E.

Niort, *ne-or′,* a town and the capital of the department of Deux Sèvres, situated on the picturesque banks of the Sèvre. Pop. 21,237.

Niver′nais, a province in the interior, on the west of Burgundy.

Noirmoutier, *nwār-moo-te-ā′* (the black monastery), an island on the N.W. coast of the dep. Vendée, near the mouth of the Loire. Pop. 5908.

Nor'mandy, a maritime province on the English Channel.

Oise, a river which rises in the Ardennes, and, receiving the Aisne near Compiegne, falls into the Seine below St Germain.

Ol'eron, an island on the S.W. coast, opposite the mouth of the Charente. Pop. 18,178.—45, 55 N. 1, 20 W.

Orange, *or-angzh'*, the ancient *Arausio*, a town in the department of Vaucluse, in a beautiful plain near the Rhône; it has some interesting Roman remains. From this place came the title Prince of Orange. Pop. 6860.

Orléanais, *or-lā-ân-nā'*, a province in the interior, S. of the Isle of France.

Orléans, *or-lā-ang'*, the *Genabum* of the Romans, a city of Orléanais, capital of the department of Loiret, situated on the Loire, over which is a noble bridge. Its cathedral is a fine edifice; it is the seat of a university; and is famous for the memorable siege which its inhabitants, animated by Joan of Arc, sustained against the English in 1428. Pop. 54,400.—47, 54 N. 1, 54 E.

Orne, a river which rises near Séez, in the dep. Orne, and falls into the English Channel below Caen.

Orthez, *or-tā'*, a town in Bearn, department of Lower Pyrenees, on the Gave-du-Pau. Near this, in 1814, the Duke of Wellington defeated the French army commanded by Marshal Soult. Pop. 4657.

Par'is, the ancient *Lutetia*, the capital of France, and of the department of Seine. Pop. 2,269,023.—48, 50 N. 2, 20 E. *See* REMARKS, page 135.

Pau, *po*, a town, capital of the department of Lower Pyrenees, beautifully situated on the Gave, the birthplace of Henry IV. of France. Pop. 28,337.

Perigueux, *pā-re-guh'*, an ancient town, capital of the department of Dordogne. Pop. 25,036.

Perpignan, *per-peen'yang*, a strong frontier-town, capital of the department of Eastern Pyrenees, on the Tet. Pop. 24,959.

Pic'ardy, a province in the north.

Poitiers, *pwâ-te-ā'*, an ancient city, capital of the department of Vienne; memorable for the victory of Edward the Black Prince over the French king in 1356. Pop. 34,355.—46, 35 N. 0, 20 E.

Poitou, *pwâ too'*, a maritime province in the west of France.

Privas', a town, capital of the department of Ardèche, the centre of a great silk trade. Pop. 5591.

Provence, *pro-vângss'*, a province bounded on the E. by Nice.

Puy de Dôme, *pwee-de-dome'* (the dome-shaped peak), a mountain in Auvergne, 4806 feet high.

Pyrenees', an extensive range of lofty mountains, the boundary between France and Spain. Mount Perdu is 10,994 feet high.

Quiberon, *ke-beh-rong'*, a small town in the department of Morbihan, at the extremity of the peninsula of Quiberon. Pop. 759.

Quimper, *keng-pair'*, a town, capital of the department of Finistère, on the Odet. Pop. 15,288.

Reims, or **Rheims**, *rangz*, the ancient *Durocortorum*, a city in the department of Marne, on the Vesle. It is the ecclesiastical capital of France. The cathedral is one of the finest examples of Gothic architecture in Europe. Pop. 93,683.—49, 15 N. 4, 2 E.

Rennes, *renn*, a city and the capital of the department of Ille and Vilaine. Its public library contains several rare books and MSS. Pop. 57,430.—48, 7 N. 1, 40 W.

Rhé, or **Ré**, *rā*, an island on the W. coast, opposite La Rochelle.—46, 12 N. 1, 20 W.

Rhône, a large and rapid river which rises in Switzerland, 5 miles from the source of the Rhine, and expands into the Lake of Geneva; issuing from which it forms the boundary between Upper Savoy and Ain, and Ain and Isère. From Lyons its course is southerly, and after passing Vienne, Valence, and Avignon, it enters the Mediterranean by four mouths.

Riom, *re-ong'*, a town in the department of Puy de Dôme, situated amid lofty mountains and fine scenery. Its manufactures are considerable. P. 9590.

Roanne, a handsome town in the department of Loire. Pop. 24,992.

Roche'fort (the rock fortress), a strong seaport in the department of Lower Charente; it is a naval station, with a large arsenal and dockyards. Pop. 26,022.—45, 56 N. 0, 57 W.

Rocroi, *rok-rwâ'*, a strong town in the department of Ardennes, where the French under the Prince of Condé gained a signal victory over the Spaniards in 1643. Pop. 1649.

Rodez, *ro-dā'*, a town, capital of the

department of Aveyron, with a fine cathedral. Pop. 14,425.

Romans, *ro-mang'*, a fortified town in the department of Drôme, on the Isère; it commands a magnificent view of the valley eastward to Mont Blanc. Pop. 11,916.

Roubaix, *roo-bā'*, a town in the department of Nord, a chief seat of the French woollen manufacture. Pop. 79,706.

Rouen, *roo-ang'*, the ancient *Rothomagus*, an important commercial and manufacturing city, capital of the department of Lower Seine; its ancient cathedral is a noble edifice. Pop. 105,860.—49, 26 N. 1, 6 E.

Rousillon, *roo-sil-yong'*, a small province in the S., now forming the department of Eastern Pyrenees. Pop. 208,855.

St Amand, *sengt a-mang'*, a town in the department of Cher, at the confluence of the Marmandi and Cher. Pop. 8082.

St Amand les Eaux, *sengt â-mang' lā-zo'*, a town in the department of Nord, on the Scarpe, with a great trade in flax. Pop. 7881.

St Brieuc, *seng bre-u'*, a town, and capital of the department of Côtes du Nord. Pop. 14,869.

St Chamond, *seng shâ-mong'*, a busy manufacturing town in the department of Loire, at the confluence of the Gier and the Janon. Pop. 14,149.

St Cloud, *seng kloo*, a small town . miles W. from Paris. The magnificent royal chateau here was burnt during the Franco-Prussian war. Pop. 4081.

St Denis, *seng deh-ne'*, a town in the department of Seine, 5 miles N. of Paris, with a celebrated abbey, the burial-place of the French kings. Pop. 43,127.

St Etienne, *sengt ā-te-en'* (St Stephen), a flourishing town in the department of Loire, with extensive manufactures of arms, hardware, and ribands Pop. 114,962.—45, 26 N. 4, 23 E.

St Ger'main-en-Laye, a town i.. the department of Seine and Oise, on the Seine, 14 miles N.W. of Paris, ir the vicinity of a fine forest. Its ancien castle and magnificent terrace, 1½ mil in length, command a delightful view Pop. 15,545.

St Lô, a manufacturing town, capita of the department of Manche, on th Vire. Pop. 9889.

St Ma'lo, a strong seaport in the department of Ille and Vilaine; it has good trade, and is much frequented watering-place. Pop. 10,891.—48, 39 . 2, 1 W.

St Omer, *sengt o-mair'*, a strongly ortified town in the department of Pas de Calais, on the Aa, the seat of an active trade. Pop. 20,479.—50, 44 N. 2, 15 E.

St Pons, a town in the department of Hérault, on the Jaur, with large woollen manufactures. Pop. 3233.

St Quentin, *seng kang-teng'*, a flourishing town in the department of Aisne, on the Somme. It has large cotton manufactures. The Canal of St Quentin, uniting the Schelde at Cambray with the Oise, passes through a tunnel, 3 miles in length, cut through solid rocks. Pop. 45,697.

St Servan', a seaport in the department of Ille and Vilaine, on the Rance, opposite St Malo; it has an active trade. Pop. 10,691.

Saintes, *sengt*, the *Mediolanum* and *Santones* of the Romans, a town in the department of Lower Charente, containing several Roman remains. Pop. 13,341.

Saintogne, *seng-tonzh'*, a province in the W., now forming the department of Lower Charente.

Salins, *sâ-leng'* (from *salann*, salt), a town in the department of Jura, noted for its salt-works. Pop. 5771.

Sam'bre, a river which rises in Aisne, and joins the Meuse at Namur, in Belgium.

Saône, *son*, a large river which has its source in the Vosges Mountains, and falls into the Rhône at Lyons.

Saumur, *so-mur'* (the walled buildings), a town in the department of Maine and Loire, famous as a stronghold of the Protestants in the 16th and 17th centuries. Pop. 13,439.

Savoy, *sa-vwâ'*, the ancient *Sabaudia*, a mountainous district on the western slopes of the Alps, which divides it from Italy. It was an independent county from 1027 till 1416, and a duchy from 1416 till 1720, when its dukes became kings of Sardinia. It was annexed to France from 1792 till 1815, forming the department of Mont Blanc and part of the department of Leman. It was restored to Sardinia in 1815, and ceded by that country to France in 1860. It has been divided into two departments, viz., Sa'voy (pop. 266,438) and Upper Savoy (pop. 274,087).

Schelde, *skel'deh*, or **Scheldt**, *skelt*, or **Escaut**, *es-ko'*, a large river which rises in a small lake in Aisne, and

entering Belgium falls into the North Sea below Antwerp.

Sedan′, a strong frontier-town in the department of Ardennes, on the Meuse, the birthplace of Marshal Turenne. It is celebrated for the manufacture of fine woollen cloths and of fire-arms. Pop. 19,240. On 1st September 1870, a decisive battle was fought at Sedan between 100,000 French and 240,000 Germans. Next day the French capitulated, and Napoleon III. surrendered himself and his army as prisoners of war to the King of Prussia.

Seine, *sane* (the smooth river), a large river which rises in the department of Côte-d'Or; receiving in its course numerous tributaries, it flows through the capital, passes Rouen, and falls into the English Channel at Havre.

Sens, *sang*, a town in the department of Yonne, with a fine cathedral. Pop. 13,440.

Sèvre, two rivers rising in the department of Deux Sèvres; the one flows into the Loire at Nantes; the other, after receiving the Vendée, falls into the Bay of Biscay.

Sèvres, a town S.W. of Paris, celebrated for its manufacture of porcelain, long considered the most beautiful in Europe. Pop. 6768.

Soissons, *swâ-song′*, an ancient city in the department of Aisne, in a charming valley; it was the capital of Clovis, the founder of the French monarchy. Pop. 10,895.

Somme, *som* (the rough or rugged river), a river, departments of Aisne and Somme, which passes Amiens, and falls into the English Channel below Abbeville.

Tarare′, a manufacturing town in the department of Rhône. Pop. 12,604.

Taras′con, a strong town in the department of Mouths of the Rhône, opposite Beaucaire, to which it is joined by a suspension bridge. Pop. 7154.

Tarbes, *tarb*, a town, capital of the department of Upper Pyrenees, situated on the Adour. Pop. 22,897.

Tarn, a river which rises in the Cevennes, runs through Montauban, and falls into the Garonne.

Thiers, *te-er′*, a town in the department of Puy de Dôme, long famed for its manufactures of hardware, cutlery, and paper. Pop. 10,583.

Toul, a fortified town in the department of Meurthe and Moselle, on the Moselle. Pop. 9632.

Toulon, *too-long′*, the *Telo Martius* of the Romans, a strong seaport in the department of Var, the chief naval station of France on the Mediterranean, with extensive docks and arsenal. Pop. 61,239.—43, 7 N. 5, 55 E.

Toulouse, *too-looz′*, the *Tolosa* of the Romans, a city and capital of the department of Upper Garonne, at the junction of the Garonne with the Canal of Languedoc. It has considerable trade, and is the seat of a university. Pop. 127,196.—43, 35 N. 1, 26 E.

Touraine′, a rich inland province, traversed by the Loire.

Tourcoing, *toor-kweng′* (corner tower), a flourishing manufacturing town in the department of Nord. Pop. 34,415.

Tours, the *Cæsarodunum* of the Romans, a city and capital of the department of Indre and Loire, pleasantly situated on the Loire, over which there is an elegant bridge of 15 arches. Pop. 52,209.—47, 23 N. 0, 42 E.

Trouville, *troo-veel′*, a beautiful and fashionable watering-place, and port of refuge for the French marine, department of Calvados. Pop. 5711.

Troyes, *trwâ*, the *Augustobona* of the ancients, a city and capital of the department of Aube, situated on the Seine, in a fruitful plain. Pop. 46,067. —48, 18 N. 4, 5 E.

Tulle, *tull* (the watch-tower), a town, capital of the department of Corrèze. Pop. 10,612.

Ushant′ (*Fr.* **Ouessant**), a small island off the W. coast of department Finistère.—48, 28 N. 5, 3 W.

Valence, *vâ-lângss′*, anciently *Valentia* (the powerful), a city, the capital of the department of Drôme, situated on the Rhône. Pop. 21,941.

Valenciennes, *vâ-lâng-se-enn′*, a very strong town in the department of Nord, with fine manufactures of lace, gauze, and cambric. It is the birthplace of Froissart the historian. Pop. 23,291.—50, 21 N. 3, 31 E.

Vannes, *vânn*, a seaport, capital of the department of Morbihan. Pop. 16,667.

Vaucluse, *vo-kluz′* (the enclosed valley), a village of Avignon, department of Vaucluse, long the residence of the poet Petrarch. Here is a famous fountain of pure water, which rises in a vast cavern, and forms a small stream, an affluent of the Rhône.

Vendée, *vâng-dā′*, a small river traversing the department Vendée, falling into the Sèvre.

Vendée, a department celebrated

for its heroic stand in favour of the royalist cause, 1792-95. Pop. 421,642.

Vendôme′, a town in the department of Loir and Cher. Pop. 7913.

Verdun, *ver-dung′* (the fort on the water), a fortified town in the department of Meuse, where the English residents were detained prisoners of war in 1803. Pop. 15,682.

Versailles, *ver-sa′ye*, a town 12 miles S.W. of Paris, capital of the department of Seine and Oise, with a royal chateau, in which the King of Prussia lodged during the investment of Paris, 1870-71, and where he was proclaimed Emperor of Germany. Pop. 48,012.

Vesoul, *veh-zool′*, a town, capital of the department of Upper Saône. Pop. 9431.

Vienne, *ve-enn′*, the *Vienna* of the Romans, a city in the department of Isère, on the Rhône, containing several Roman remains. Pop. 22,740.

Vienne′, a river which rises in the mountains of Auvergne, and falls into the Loire above Saumur.

Vilaine′, a river which rises in Mayenne, flows through Rennes, and falls into the Bay of Biscay.

Villefranche, *veel-frângsh′*, a stirring town in the department of Aveyron, with a great trade. Pop. 8433.—Another town of the same name, important for its manufactures, in the department of Rhône, on the Morgon, an affluent of the Saône. Pop. 12,032.

Vitré, *ve′trā* (the victorious), a town in the department of Ille and Vilaine, with manufactures of linens. Pop. 8846.

Vosges, *vozh*, a chain of mountains in the N.E. of France. The highest peak is 4690 feet.

Yonne, a river which rises in the S.E. of Nièvre, and, flowing N.W., falls into the Seine.

Yvetot, *eev′tō* (the farm of Ivo), a manufacturing town in the department of Lower Seine. Pop. 7625.

SPAIN

Is bounded N. by the Bay of Biscay, and the Pyrenees, which separate it from France; W. by Portugal and the Atlantic Ocean; S. by the Straits of Gibraltar and the Mediterranean; E. by the Mediterranean. It contains 182,758 square miles. Its population is 16,626,000.

Divisions.—Continental Spain is now divided into 47 provinces. In the following table, the names of the chief towns are also the names of the modern provinces:—

Old Provinces.	Chief Towns.
New Castile	MADRID, Toledo, Guadalaxara, Cuença.
La Mancha	Ciudad Real.
Old Castile	Burgos, Logrono, Santander, Soria, Segovia, Avila, Palencia, Valladolid.
Leon	Leon, Zamora, Salamanca.
Asturias	Oviedo.
Galicia	Corunna, Lugo, Orense, Pontevedra.
Estremadura	Badajoz, Caceres.
Andalusia	Seville, Cadiz, Huelva, Cordova, Jaen, Granada, Almeria, Malaga.
Murcia	Murcia, Albacete.
Valencia	Valencia, Alicante, Castellon de la Plana.
Aragon	Saragossa, Huesca, Teruel.
Catalonia	Barcelona, Tarragona, Lerida, Gerona.
Basque Provinces	Navarre, Biscay, Guipuzcoa, Alava.

Islands.	Chief Towns.
Balearic	Palma, Port Mahon.
Canaries	Santa Cruz.

Capes.—Ortegal, Finisterre, Trafalgar, Europa Point, De Gata, Palos, St Martin, Creux.

Mountains.—Pyrenees, Mountains of Asturias, of Castile, and of Toledo, Sierra Morena, Sierra Nevada, Montserrat.

Rivers.—Ebro, Xucar, Segura, Guadalquivir, Guadiana; Minho, except the lowest reaches; upper Tagus and Douro.

Foreign Possessions.—In Africa, four penal settlements on the coast of Morocco, and the islands of Fernando Po and Annobon in the Gulf of Guinea; in America, the West Indian islands of Cuba, Porto Rico, and Pinos; in Oceania, three groups in the East Indian Archipelago, viz., the Philippines, Carolinas, and Marianas.

REMARKS.

Spain extends from 36° 0′ to 43° 47′ N. lat., and from 9° 20′ W. to 3° 20′ E. long., being 650 miles in length from E. to W., and 520 miles in breadth from N. to S.

Spain and Portugal form the ancient *Iberian* Peninsula, which is so compact in outline that it may be described as a peninsula without peninsulas, *i.e.*, without great peninsulas; of small peninsulas, the most famous one, the Rock of Gibraltar, belongs neither to Spain nor to Portugal. The Pyrenees are more precipitous towards Spain than towards France, and the highest summit is in Spanish territory, viz., Pic de Nethou, summit of Maladetta, 11,168 feet. The Pyrenees are continued through the maritime provinces of northern Spain, under the name of Cantabrian chain, or mountains of Asturias, till they terminate in Cape Finisterre. From the Pyrenees, a secondary range, called the Iberian, stretches southward, in a long irregular line, to Cape de Gata; and from this secondary range four chains run westward to the Atlantic, viz., the Sierra de Guadarrama, the Sierra de Guadeloupe, the Sierra Morena, and the Sierra Nevada, the last of which contains, towards its eastern end, the highest summit in Spain, the Cumbre de Mulahacem, 11,705 feet. Very remarkable it is that with a highly mountainous surface Spain does not possess a single lake worth mentioning. The word *sierra*, from the Arabic *sehrah*, is the same as Sahara, meaning "uncultivated tract." Forests cover one-twelfth of the whole surface: they shelter wolves, boars, and bears, and they yield the hazel-nuts known in England as Barcelona nuts; chestnuts, an article of food with the

peasantry in the north ; carobs, and cork. By the four mountain ranges above mentioned, and the Cantabrian chain, which also runs from east to west, the course of the four Atlantic rivers of the peninsula is determined ; but of these four rivers, the Guadalquivir alone is wholly Spanish. It and the Ebro, which flows into the Mediterranean, are alike useful for inland traffic, the Guadalquivir being navigable to Seville, the Ebro to Saragossa. Between the Cantabrian chain and the Sierra Morena, and with the Iberian range for its eastern boundary, lies the central table-land of Spain, so elevated that the mean annual temperature is low for the latitude, while the extremes of temperature are great at opposite seasons. This table-land is the most nearly rainless country in Europe, the moisture of the cloud-laden winds from the Atlantic and Mediterranean being poured out on the coast regions and on the mountains first met with, so that dreary treeless flats prevail, yielding only scanty pasture to sheep, and justifying the phrase "tawny Spain." The one large centre of population on the table-land is MADRID, originally a hunting-seat of the kings, now capital of Spain. Elevated 2450 feet above the ocean-level, it cannot grow its own oranges, though that fruit ripens at Naples and Rome, both which cities are situated farther north. Central position is its only point of fitness as capital of the country ; for the neighbourhood is infertile, and its river, the Manzanares, a secondary affluent of the Tagus, so far from being navigable, is in summer quite dry. The square shape of Madrid is defined by a wall of reddish brick about twelve miles in circuit, and the houses are of the same material. Gloom, relieved by gleams of the picturesque, is said to be the effect, as in Spanish cities generally. The chief attractions of Madrid are its picture-gallery and the public promenade called Prado.

The climate of the Mediterranean sea-board contrasts with that of the central table-land. In the south-east, particularly in Murcia and Valencia, there reigns almost perpetual spring. Here is the "garden of Spain," its extraordinary fertility in rice and maize being partly due to the irrigation-works established by the Moors, and still maintained. Here especially thrives the mulberry tree, the leaves of which are the silkworm's food ; and here also grows the *esparto*, used from time immemorial for the manufacture of ropes, mats, and baskets, and now largely exported for the manufacture of paper. In the south and south-west, again, a semi-tropical climate prevails, so that cotton and indigo, the sugar-cane and the coffee-shrub, and several fruit-bearing palms, are there successfully cultivated. Here also is grown the sherry of Spain, so called from the town of Xeres; but immense quantities of grapes are dried and exported, especially from Malaga, as raisins. On the other hand, this semi-tropical region suffers from the *solano*, a hot wind from Africa, which blows sometimes for a fortnight at a time, withering up vegetation, enervating the inhabitants, and afflicting them with fever.

It thus appears that differences of latitude, of elevation, and of

exposure create an extraordinary variety in the produce of Spanish soil, and that the amount of it would be indefinitely increased if moisture were introduced wherever it is naturally wanting. The mineral wealth of the country is, in like manner, various and abundant. In the yield of lead, Spain surpasses all other countries in Europe. Immense quantities of very pure iron-ore are imported from Asturias and Galicia into Britain; and in the south, in the province of Huelva, are immense deposits of iron pyrites, the principal mines, the Rio Tinto and the Tharsis, having been worked in the time of the Carthaginians and Romans. Zinc is obtained in the provinces of Santander and Guipuzcoa in the north, and in those of Murcia, Granada, and Malaga in the south. The quicksilver mines of Almaden, in the province of Ciudad Real, are unequalled for richness. Coal is found in several provinces, most abundantly in that of Oviedo. Salt is obtained both from mines of rock-salt and from lagoons at Cadiz. At Cardona, near the centre of Catalonia, is a hill of rock-salt 500 feet high, which so impregnates the small river at its base, that for several miles fish cannot live in the waters. The cotton manufacture has revived in Catalonia of late, and so have the metal industries in the Basque provinces; but the manufactures of Spain are nowhere on a scale worthy of the resources of the country. Internal trade is not encouraged by adequate means of communication, and the foreign trade is almost confined to that with France and Great Britain. The chief exports are wheat, wines, and fruits, oils and soap, ores and esparto.

The Celtic race is the basis of the Spanish population, modified, however, by the long Roman occupation, by the settlement of Teutonic tribes, as Visigoths and Vandals, and by the Moorish conquest. How effective was the Roman occupation appears from the fact that the Spanish language is a daughter of the Latin. About 60,000 Moors, of pure blood, are said still to be living around Valencia and in some remote valleys. And the Basque provinces are occupied, it is supposed, by the old Iberian race—at any rate, by a race whose language has not yet been connected satisfactorily with any other language in the world. The typical Spaniard is well made, with a sallow complexion, sharp features, dark hair, and black eyes. Their virtues of frugality and temperance allow the Spaniards to be indolent without suffering privation; but along with their indolence co-exists an enthusiasm which may break forth into either a brutal deed or a chivalrous exploit. The popularity of bull-fighting is deemed proof that cruelty prevails over tenderness in the national heart. Though reserved, and standing upon his dignity with strangers, the Spaniard, when his claims to regard have been fairly allowed, throws off restraint, forms strong attachments, and renders real service. Certain, however, it is that the Spaniards are far behind in the race of modern industry: their railways are in the hands of Frenchmen, their mines are worked by English companies, and their hotels are managed by

Italians. Neither do their changes from monarchy to republicanism and back again, and their changes of dynasty since 1820, indicate fitness for political life. The public credit of the country is gone. At present, the government is a limited hereditary monarchy under Alphonso, eldest son of Isabella II., who was dethroned in 1868. The Cortes, or Spanish parliament, consists of two chambers called Senate and Congress. The established religion, which is also that of almost the whole population, is the Roman Catholic. Not one of the ten universities of Spain has now a European reputation; and scarcely half of the children of school age are at school, the law which makes attendance compulsory not being carried out.

The Balearic Islands are five in number, viz., *Majorca*, *Minorca*, *Iviza*, *Formentera*, and *Cabrera*. The first is highly mountainous in the north-west, where the peak of Torellas rises to the height of 4700 feet, and in the east it possesses at Arta one of the most remarkable stalactitic caverns in the world. Minorca suffers from violent north winds, injurious to vegetation: Iviza, from its fertility, is called the pearl of the Mediterranean. The language of these islands is, like the population, a mixture of Arabian, Greek, Roman, and Spanish elements.

The Canary Islands, *Insulæ Fortunatæ* of the ancients, though physically belonging to Africa, form an integral part of the Spanish monarchy, and are occupied by a purely Spanish population. They are of volcanic origin, mountainous, and highly fertile. The snow-capped peak of Teneriffe, the largest member of the group, rises to the height of 12,182 feet, bearing a semi-extinct crater; it is seen by mariners at a distance of 140 miles. The group consists of seven islands, Grand Canary and Palma being the next largest to Teneriffe. Characteristic exports are archil, cochineal, and vanilla.

The foreign possessions of Spain are described under Africa, America, and Oceania.

EXERCISES.

What are the boundaries of Spain? What is its extent? What is its population? Name its provinces. What are the principal towns in Galicia, in Asturias, in Biscay, in Navarre? etc. Where are Cartagena, Seville, Barcelona, Badajoz, Valladolid, Talavera, San Sebastian, Saragossa, Cadiz? etc.

Name the capes. Name the mountains, and trace their direction. Name the rivers, and trace their course. Where is Europa Point, Montserrat, Minorca, the Tagus, the Ebro, Cape de Gata, the Guadalquivir, the Douro? etc.

What kind of settlements has Spain on the coast of Morocco? Name the Spanish islands in the Gulf of Guinea. Which three islands does Spain possess in the West Indies, and which three groups in the East Indian Archipelago?

Between what degrees of latitude and longitude is Spain situated? What are its length and breadth? What name is given to the peninsula

of which it forms part? What natural features are wanting in the outline and in the interior of Spain respectively? What other countries share the peninsula with Spain? Describe the Spanish Pyrenees, and name their continuation westward. Name the highest summit of the Pyrenees, and the highest in all Spain. What range forms the watershed between the Atlantic and the Mediterranean? Name from north to south the five mountain-chains which direct the course of the four Atlantic rivers of the peninsula? What is the meaning of *sierra* in the names of these mountains? What useful produce is yielded by the forests? Which one of the Atlantic rivers is wholly Spanish? Up to what towns are the Guadalquivir and the Ebro respectively navigable? Within what mountain limits does the central table-land lie? Account for the low temperature and comparative rainlessness of the table-land. Describe its general appearance. Which two of the *sierras* traverse it? How came the capital to be built in such a region? Why do oranges not ripen at Madrid? Describe that city from the outside and from the inside. What are its two principal attractions?

Where does the "garden of Spain" lie? Mention its characteristic products. How has man aided nature there, so as to increase the fertility of the soil? Where does the semi-tropical region lie? Mention its characteristic products? Name and describe the wind from which it suffers. For what are Malaga and Xeres respectively famed?

To what three causes is the extraordinary variety in the produce of the Spanish soil due? Name the three metals most abundant in Spain. Of which one does Spain produce more than any other European country? Name two mines of iron pyrites which have been worked from the time of the Carthaginians and Romans until now. Where are the zinc mines? In what province is coal most abundant? From what two sources is salt obtained? What of the hill of rock-salt at Cardona? In what provinces have the cotton and metal industries respectively their chief seat? What of the internal means of communication? To what countries is the foreign trade almost confined? Name the chief exports.

How has the original Celtic element been modified in the Spanish race? What fact proves the effectiveness of the Roman occupation? Of what two races do pure remnants remain, and where? Describe the typical Spaniard's personal appearance. What virtues betray him into what vice? What sport of his argues cruelty? On what terms can his friendship be obtained? What is remarkable about the management of Spanish mines, railways, and hotels? Of what nature is the government at present? What is the religion of almost the whole population? What of the schools in Spain?

Name the five Balearic islands. Mention two notable objects in Majorca. Contrast Minorca and Iviza. What about the race and language of the inhabitants?

What were the Canary Islands anciently called? Describe them. How many islands are in the group? Name the three principal ones. Describe in particular the peak of Teneriffe. Name characteristic exports from the Canaries.

DESCRIPTIVE TABLE.

Albacete, *ăl-bă-thā'tā*, the capital of a province of the same name. Pop. 18,976.

Alcala' de Henares, *ā-nă'res* (the castle on the Henares river), a town in the province of Madrid, with a university; here Cervantes was born in 1547. Pop. 12,317.

Alcan'tara (the bridge), the *Norba Cæsarea* of the Romans, a fortified town in the province of Caceres, on the S. bank of the Tagus, with the ruins of Trajan's bridge, partly destroyed by the British in 1809. It gives name to a Spanish order of knighthood. Pop. 3527.

Alco'y, an inland town in the province of Alicante. Pop. 32,497.

Algeciras, *ăl-hā-the'răs* (the islands), a town on the west side of the Bay of Gibraltar. Pop. 12,465.—36° 8′ N. lat., 5° 26′ W. long.

Alican'te, a seaport, the capital of a province of the same name, with a great export trade in barilla, wine, and fruits. Pop. 34,926.—38, 21 N. 0, 29 W.

Almaden' (the mine), a town in the province of Ciudad Real, famed for its rich mines of quicksilver. Pop. 7755.

Alma'gro, a town in the province of Ciudad Real, situated in a fertile plain, noted for its mules. Pop. 8628.

Alman'za (the plain), a town in the province of Albacete. Pop. 7960.

Almeri'a (conspicuous), a flourishing town and seaport, the capital of a province of the same name. Pop. 40,323. —36, 51 N. 2, 31 W.

Andalusia, *ăn-dă-loo'she-ă*, Sp. pron. *ăn-dă-loo-the'ă*, one of the old provinces in the south; it is large and important, and watered by the Guadalquivir. It now forms the modern provinces of Seville, Cadiz, Huelva, Cordova, Jaen, Granada, Almeria, and Malaga.

Andor'ra (a place thick with trees), the capital of a little republic of the same name, on the southern side of the Pyrenees, adjoining the Spanish province of Lerida, and the French department of Ariège. Pop. 3000.—The territory of the republic, which has a population of about 12,000, stretches about 36 miles from N. to S., and about 30 from E. to W.; it is nominally under the protection of France and the Spanish Bishop of Urgel. The inhabitants are chiefly occupied in agriculture and mining.—42, 20 N. 1, 27 E.

Andujar, *ăn-doo-hăr'*, a fine old town in the province of Jaen, on the Guadalquivir, with numerous churches, and a bridge of fifteen arches. Pop. 11,974. 38, 2 N. 3, 59 W.

Anteque'ra, a town in the province of Malaga, containing several ancient remains. Pop. 25,549.

Ar'agon, an old province in the north-east, mountainous but fertile, intersected by the Ebro. It embraces the modern provinces of Saragossa, Huesca, and Teruel.

Aranjuez, *ă-rān-hweth'* (the altar of Jove), a town on the Tagus, with a fine palace and gardens. Pop. 8154.

Astu'rias, now known as Oviedo, a province in the N., on the Bay of Biscay.

A'vila, on the Adaja, with a university, the capital of a province of the same name. Pop. 9199.

Badajoz, or Badahoz, *bad'a-hoce*, Sp. pron. *bă-dă-hoth'*, a strong town, the capital of a province of the same name, beautifully situated on the Guadiana. It was stormed by the British under Wellington in 1812. Pop. 22,965.—38, 52 N. 6, 48 W.

Balear'ic Islands. Pop. 289,035. *See* Remarks, page 153.

Barcelo'na, a strong seaport on the Mediterranean, the capital of a province of the same name, and the first commercial city of Spain. Pop. 249,106. —41, 22 N. 2, 10 E.

Basque Provinces, a mountainous region in the north, inhabited by a peculiar and brave race, comprising the modern provinces of Navarre, Biscay, Guipuzcoa, and Alava.

Bidasso'a, a river of Navarre, the boundary between France and Spain; it rises in the Pyrenees, and falls into the Bay of Biscay.

Bil'boa, or Bilba'o (under the hill), the capital of the province of Biscay, on the Nervion (a navigable river), about 10 miles from the sea; its commerce is extensive, particularly in wool. Pop. 32,734.

Burgos, *boor'goce* (fort or castle), the capital of a province of the same name, on the Arlanzon, formerly the residence of the kings of Castile. Pop. 29,683.

Caceres, *kă'thā-res*, the capital of a province of the same name, with elegant public buildings. Pop. 14,816.

Cadiz, *kă'dis*, Sp. pron. *kă'deeth* (the city, the *Gades* of the Romans), the capital of a province of the same name,

situated on the Isle of Leon; it is strongly fortified, and its harbour is one of the best in Europe. Pop. 65,028.—36, 32 N. 6, 18 W.

Canary Islands. *See* REMARKS, page 153.

Cardo'na, a fortified town of Barcelona, on the Cardenet; near it is a mountain of solid rock-salt, of the purest quality, which has been largely quarried from the earliest times. Pop. 4360.

Cartage'na, the *Carthago Nova* of the Romans, a strong seaport in Murcia, with a noble harbour. Pop. 75,908.—37, 36 N. 1, 2 W.

Castel'lon de la Pla'na, the capital of a province of the same name. Pop. 23,393.

Castile, *kâs-teel'*, **Old** and **New**, two old provinces in the centre of the kingdom, consisting of extensive plains intersected by mountains. On the former are fed great flocks of merino sheep. Old Castile comprises the modern provinces of Burgos, Logrono, Santander, Soria, Segovia, Avila, Palencia, and Valladolid; New Castile those of Madrid, Toledo, Guadalaxara, and Cuença.

Catalo'nia, an old province in the N.E., bordering on the Mediterranean; it is large and fertile, though mountainous, and forms the modern provinces of Barcelona, Tarragona, Lerida, and Gerona.

Chinchil'la, a town in the province of Albacete. Pop. 6080.

Ciudad Real, *the-oo-dad' rā-âl'*, the capital of a province of the same name, near the Guadiana. Pop. 13,589.

Ciudad' Rodri'go (Roderick's city), a strongly fortified town in the province of Salamanca. Pop. 6856. Here the British, under Wellington, gained a victory over the French in 1812.

Cor'dova, or **Cor'doba**, the capital of a province of the same name, formerly the capital of a Moorish kingdom; it contains a remarkable mosque. Pop. 49,855.—52, 0 N. 4, 46 W.

Corunna, *ko-roon'yâ*, a seaport, the capital of a province of the same name, with considerable trade. Here Sir John Moore fell, after repulsing the French under Marshal Soult, in 1809. Pop. 33,735.—43, 22 N. 8, 22 W.

Creux, Cape, the extreme N.E. point of Gerona.—42, 19 N. 3, 20 E.

Cuença, *kwen'sâ*, the capital of a province of the same name. Pop. 8202.

Douro, *doo'ro* (water), a large river which has its source among the mountains in Soria, traverses Burgos, Valladolid, and Zamora, forming the boundary between Salamanca and the Portuguese province of Tras-os-Montes, and, after passing through the N. of Portugal, falls into the Atlantic at Oporto.

E'bro, a large river which rises in the Cantabrian Mountains, in Santander, and, flowing with a south-easterly course through Burgos, Navarre, Saragossa, and Tarragona, falls into the Mediterranean below Tortosa.

Ecija, *ā'the-hâ* (the rock dwelling), an ancient town in the province of Seville, on the Genil, in a district rich in corn and olives. Pop. 24,955.

Elche, *el'chā* (town on the hill), a thriving town in Alicante. Pop. 19,636.

Estella, *es-tel'yâ*, a town in Navarre, on the Ega, with a castle; it is the seat of a university. Pop. 6749.

Estremadu'ra, an old pastoral province, watered by the Tagus and Guadiana, comprising the modern provinces of Badajoz and Caceres.

Euro'pa Point, the southern extremity of the Rock of Gibraltar.—36, 6 N. 5, 22 W.

Felaniche, *fā-lâ-neech'*, written also **Felanitx'**, a town of great antiquity in the island of Majorca, 28 miles E.S.E. of Palma. Pop. 11,018.

Feli'pe, San, or **Xativa**, a town in Valencia, with silk and cotton manufactures. Pop. 14,534.

Fernan'do, San, a strong town on the Isle of Leon, near Cadiz, with an observatory and naval academy. Pop. 26,822.

Ferrol' (the beacon), a seaport in the province of Corunna, on an arm of the Bay of Betanzos, an important naval station, with an excellent harbour strongly fortified. Pop. 23,811.—43, 29 N. 8, 13 W.

Figueras, *fe-gā'râs* (the fig trees), a strong fortress in the province of Gerona. Pop. 11,739.

Finisterre', Cape (the land's end), the north-western extremity of Spain, on the coast of Corunna.—42, 54 N. 9, 20 W.

Fontara'bia, Sp. pron. *fwen-tā-râ-be'â* (the rapid or swift-flowing fountain), a fortified frontier-town in Guipuzcoa, at the mouth of the Bidassoa. Pop. 3713.

Formente'ra (abounding in grain), small island in the Mediterranean, south of Iviza. Pop. 2000.

Galicia, *gal-ish'e-a* (country peopled by Gauls), an old province in the N.W. It embraces the modern provinces of Corunna, Lugo, Orense, and Pontevedra; mountainous, but interspersed with fertile and picturesque valleys.

Ga'ta, Cape de, the S.E. point of Granada.—36, 43 N. 2, 8 W.

Gerona, *hā-ro'nā,* the capital of a province of the same name, on the Ter, with a fine cathedral. Pop. 15,015.

Gibral'tar (the mountain of Tarik). Pop., exclusive of military, 18,381.—36, 7 N. 5, 21 W. *See* BRITISH EMPIRE, page 32.

Gijon, *he-hon',* a fortified seaport on the Bay of Biscay, in the province and 19 miles N.N.E. of Oviedo. It is a handsome town, and carries on an active trade. Pop. 30,591.

Grana'da, a province with fruitful plains, intersected by the Sierra Nevada or Snowy Mountains.

Grana'da, the capital of the above province; it was the residence of the ancient Moorish kings, whose palace, called the Alhambra, is the most splendid monument of Arabic architecture existing. Pop. 76,108.—37, 19 N. 3, 50 W.

Guadala'viar (the white river), a river which has its source in Feruel, and flows into the Mediterranean below Valencia.

Guadalaxara, *gwā-dā-lā-hā'rā,* the capital of a province of the same name, N.E. of Madrid, with a magnificent palace of the Mendoza family. Pop. 8581.

Guadalquiv'ir (the great river), a large river which rises between the Sierra Morena and the Sierra Nevada, waters the plains of the old province of Andalusia, and, flowing by Seville, falls into the Atlantic.

Guadia'na, a river which rises in Albacete, flows through Ciudad Real, Badajoz, the Portuguese province of Alentejo, separates Huelva from the Portuguese province of Algarve, and falls into the Atlantic.

Hellin, *el-yen',* a town of Albacete. Near it are the mineral baths of Azaraque. Pop. 13,655.

Huel'va, a maritime town, capital of the province of the same name, 49 miles W.S.W. of Seville. Pop. 13,174.

Huercal'-Ove'ra, a town noted for the manufacture of lace and soap, 48 miles N.E. of Almeria. Pop. 15,219.

Huesca, *hwes'kā,* the capital of a province of the same name, with a fine cathedral. Pop. 11,416.

Ildefon'so, San, a town in Segovia, with a celebrated royal palace, and a glass manufactory carried on by the government. Pop. 2727.

Ivi'za (the pine island), an island in the Mediterranean, about 60 miles from the coast of Valencia; its chief trade is in salt, which is produced by evaporation. Pop. 21,808.

Ivi'za, a fortified seaport, the chief town of the island of the same name, with a good harbour. Pop. 7393.—39, 0 N. 1, 30 E.

Jaen, *hā'en,* a considerable town, the capital of a province of the same name, situated in a fertile valley. Pop. 24,392.—37, 48 N. 3, 48 W.

Le'on, Sp. pron. *lā-on',* a province in the N.W., on the borders of Galicia, bounded by ranges of mountains.

Le'on, an ancient city, the capital of the above province, with a noble cathedral. Pop. 11,515.

Ler'ida (the town), the ancient *Ilerda,* a fortified town, the capital of a province of the same name, beautifully situated on the Segre. Pop. 20,369.—41, 40, N. 0, 30 E.

Linares, *le-nā'res* (flax fields), a town in the province and 23 miles N.N.E. of Jaen. Lead ore, rich in silver, abounds in the vicinity. Pop. 36,630.

Logrono, *lo-gron'yo,* the capital of a province of the same name, on a fine plain near the Ebro. Pop. 13,393.

Loja, *lo'ha,* a town of Granada, with manufactures of calico and paper. Pop. 18,249.

Lor'ca (the town with fine water), a handsome town in Murcia, on the Sangonera, with considerable manufactures. Pop. 52,934.

Lu'car, San, a seaport in the province of Cadiz, at the mouth of the Guadalquivir, with a good trade and flourishing manufactures. Pop. 22,777.—36, 43 N. 6, 18 W.

Luce'na (the long town), a town in the province and 35 miles S.S.E. of Cordova. It is a flourishing, well-appointed city, and possesses many manufactures. Pop. 19,540.

Lu'go (the grove), the capital of a province of the same name, on the Minho, celebrated for its hot medicinal springs. Pop. 18,909.—43, 0 N. 7, 36 W.

Madrid', Sp. pron. *mādth-reeth'.* Pop. 397,690.—40, 25 N. 3, 42 W. *See* REMARKS, page 151.

Mahon, Port, a strong seaport in the island of Minorca, with a fine harbour. Pop. 15,842.—39, 52 N. 4, 21 E.

Major′ca (the larger island), the largest of the Balearic Islands, in the Mediterranean; its valleys are very fertile, producing corn, grapes, oranges, and citrons. Pop. 204,000.—39, 35 N. 3, 0 E.

Maladet′ta, the highest peak of the Pyrenees in Spain, 11,168 feet above the sea.

Mal′aga, a commercial city and seaport, the capital of a province of the same name, with an excellent harbour; noted for its fruits and sweet wines. Pop. 115,882.—36, 43 N. 4, 25 W.

Manacor′, a town in the island of Majorca, 29 miles E. of Palma, with an ancient Moorish palace. Pop. 14,929.

Man′cha, La, an old pastoral province, now called Ciudad Real.

Manre′sa, a town in the province of Barcelona, on the Cardenet, with manufactures of silk. Pop. 16,526.

Manzanares, *mân-thâ-nâ′res* (apple-tree orchards), a town in the province of Ciudad Real, on a branch of the Guadiana. Pop. 8857.

Marbella, *mâr-bel′yâ,* a seaport of Malaga, with a fine harbour. Pop. 7947. —36, 31 N. 4, 53 W.

Marche′na (the marshy land), a finely built town, with famed sulphur baths, in the province and 30 miles E.S.E. of Seville. Pop. 13,768.

Mar′tin, Cape St, the S.E. point of Valencia, opposite the island of Iviza. —38, 47 N. 0, 10 E.

Mar′tos, a town in the province and 10 miles W.S.W. of Jaen. Famed for mineral waters. Pop. 14,654.

Mataro′, a seaport in the province of Barcelona, with thriving manufactures. Pop. 17,405.

Medi′na-Sido′nia, a city on the brow of a rocky eminence, in the province and 22 miles S.E. of Cadiz. Pop. 12,397.

Mer′ida, the ancient *Emerita Augusta*, a town in Badajoz, on the Guadiana, containing some remarkable remains of Roman grandeur. In the neighbouring town of Medellin, Cortez, the conqueror of Mexico, was born in 1485. Pop. 7390.

Minho, *meen′yo,* a river which rises near Mondónedo, in the province of Lugo, and, after flowing through Orense, forms the boundary between Pontevedra and Portugal, falling into the Atlantic.

Minor′ca, the second in size of the Balearic Islands, in the Mediterranean, 24 miles E. of Majorca. Mount Toro, near the centre of the island, is 4790 feet high. Pop. 14,000.—40, 0 N. 4, 10 E.

Mondonedo, *mon-don-yâ′do,* an episcopal town in the province of Lugo, with linen manufactures. Pop. 10,112.

Montilla, *mon-teel′ya,* a manufacturing town, province and 20 miles S.S.E. of Cordova. Pop. 13,207.

Monto′ro, a town in the province and 27 miles N.E. of Cordova. Quarries and mines abound in the neighbourhood, and much oil is exported. Pop. 13,293.

Montserrat′, a lofty, insulated mountain in Barcelona, remarkable for its hermitages and convent of Benedictines.

Motril, *mo-treel′,* a thriving town of Granada, surrounded by sugar-plantations. Pop. 16,665.

Murcia, *mur′she-â* (the boundary), an old province in the south-east, now forming the modern ones of Murcia and Albacete.

Murcia, the capital of the province of the same name, beautifully situated on the Segura. Pop. 91,805.—38, 0 N. 1, 13 W.

Murviedro, *moor-ve-â′dro* (the old fortifications), a fortified town in Valencia, on the site of the ancient *Saguntum*. Pop. 6287.

Navarre′, a small province, formerly a kingdom, bounded on the N. by the Pyrenees. Pop. 304,184.

Olivenza, *o-le-ven′sa,* Sp. pron. *o-le-ven′thâ,* a strong town in the province of Badajos, near the Guadiana. Pop. 7759.

Olot′, a town in the province of Gerona, in the valley of the Fluvio, with a considerable transit trade. Pop. 6867.

Oren′se, the capital of a province of the same name, on the Minho, celebrated for its hot springs. Pop. 12,586.

Orihuela, *o-re-wâ′lâ,* a commercial town in the province of Alicante, on the Segura, in a fertile plain. Pop. 20,929.

Ortegal′, Cape (the cape of the Galli or Gauls), the most northerly point of Corunna, and also of Spain.—43, 47 N. 7, 56 W.

Osu′na, a town in the province of Seville, in a fine valley. Pop. 17,211.

Oviedo, *o-ve-â′do,* the capital of the province of the same name, and the seat of a university; it has a fine cathedral. Pop. 34,460.

Palencia, *pâ-len′the-â,* an ancient town, the capital of a province of the

same name, on the Carrion. Pop. 14,505.

Pal'ma, a seaport, the capital of Majorca, situated on a large bay. Pop. 58,224.—39, 34 N. 2, 44 E.

Pa'los, Cape, a promontory in the E. of Murcia.—37, 37 N. 0, 42 W.—A town in the province of Huelva, at the mouth of the Tinto, from which Columbus sailed in 1492, for the discovery of the New World. Pop. 1250.

Pampelu'na, or **Pamplo'na** (the city of Pompey), a strong fortress, the capital of Navarre, on the Arga. Its castle, garrisoned by the French, was reduced by the British in October 1813. Pop. 25,630.—42, 50 N. 1, 41 W.

Ponteve'dra, the capital of a province of the same name, at the head of a bay, with a good harbour. Pop. 19,857.

Porto-Santa-Mari'a, a town in the province of Cadiz, near the mouth of the Guadalete. Pop. 22,125.

Prie'go de Cor'dova, a town, with Roman and Moorish remains, in the province and 43 miles S.E. of Cordova. Pop. 15,674.

Pyrenees. *See* FRANCE, page 146.

Reus, *rā'ooce*, a flourishing manufacturing town in the province of Tarragona. Pop. 27,595.—41, 11 N. 1, 10 E.

Ron'da, a town in the province of Malaga, situated on the summit of a precipitous rock, near the Guadiaro, which is here crossed by a stupendous bridge 280 feet high. Pop. 19,181.

Sabadell', a manufacturing town, province and 10 miles N. of Barcelona. Pop. 18,121.

Salaman'ca (the district near the salt-springs), the capital of a province of the same name, on the Tornies, the seat of a celebrated university. Here the French were signally defeated by the British under Wellington in 1812. Pop. 18,007.—41, 5 N. 5, 42 W.

Santan'der, Sp. pron. *sân-tân-dār'* (St Andrew), the capital of a province of the same name. Pop. 41,021.—43, 28 N. 3, 47 W.

Santia'go de Compostel'la, a city in the province of Corunna, formerly the capital of the old province of Galicia, with a celebrated cathedral, containing what are supposed to be the remains of St James the Apostle, from whom the town has its name. It has a university, and is the chief seat of the Knights of St James. Pop. 24,192.—42, 50 N. 8, 27 W.

Saragos'sa (*Sp.* **Zaragoza**), the ancient *Cæsarea Augusta*, the capital of a province of the same name, on the Ebro, remarkable for the heroic resistance of its inhabitants, under Palafox, against the French in 1808-9. Pop. 81,575.—41, 47 N. 0, 49 W.

Sebas'tian, San, a seaport in Guipuzcoa, strongly fortified. It was wrested from the French by the British on the 31st August 1813. Pop. 21,355.—43, 19 N. 2, 0 W.

Sego'via, the capital of a province of the same name, containing a Roman aqueduct and other monuments of antiquity. Pop. 11,318.

Segu'ra, a river which rises in the Sierra de Segura, in the province of Jaen, and, after traversing Albacete, Murcia, and Alicante, falls into the Mediterranean.

Seville, *sev-eel'* (a plain), the ancient *Hispălis*, an important commercial city, the capital of the province of the same name, situated on the Guadalquivir, in a pleasant and fertile district. Its cathedral is a magnificent Gothic pile, with a tower 350 feet high. Here the two great Spanish painters were born, Velasquez in 1599, Murillo in 1608. Pop. 133,938.—37, 24 N. 5, 47 W.

Sier'ra More'na, or the **Brown Mountains**, between Ciudad Real and Jaen.

Sier'ra Neva'da, or the **Snowy Mountains**, in Granada. *See* REMARKS, page 150.

So'ria, the capital of a province of the same name, on the Douro, near the site of the ancient *Numantia*. Pop. 6286.

Ta'gus, *Sp.* **Tajo** (the river of fish), the largest river of Spain; issuing from the mountains in Guadalajara, it traverses that province, Madrid, Toledo, and Caceres, intersects Portugal, and falls into the Atlantic below Lisbon.

Talave'ra, a town in the province of Toledo, on the Tagus. Here the French were defeated by the British in a series of sanguinary conflicts on the 27th and 28th July 1809. Pop. 10,029.—39, 58 N. 4, 47 W.

Tar'ifa, a seaport in the province of Cadiz, on the Straits of Gibraltar, the most southerly point of Spain and of the continent of Europe. Pop. 12,234. —36, 0 N. 5, 38 W.

Tarrago'na, the *Tar'raco* of the Romans, the capital of the province of the same name, containing many vestiges of ancient greatness. Pop. 23,046.—41, 8 N. 1, 16 E.

Teruel′, the capital of a province of the same name, on the Guadalaviar. Pop. 9510.—40, 25 N. 1, 5 W.

Tine′o, a town in the province and 25 miles W.N.W. of Oviedo. Pop. 21,414.

Tole′do, Sp. pron. *to-lā′dō*, a celebrated ancient city, the capital of the province of the same name, situated on a lofty rock near the Tagus. Its Alcazar or palace, and its cathedral, once a mosque, are splendid structures. Toledo was long famous for the manufacture of sword-blades. Its archbishop is primate of Spain. Pop. 21,297.—39, 56 N. 4, 0 W.

Tolo′sa, a town in Guipuzcoa, on the Orio, celebrated for its steel manufactures. Pop. 7488.

Torto′sa, a fortified town in the province of Tarragona, near the mouth of the Ebro. Pop. 24,057.—40, 48 N. 0, 33 E.

Trafal′gar, Cape, on the coast, between Cadiz and Gibraltar, memorable for the victory obtained by the British fleet under Lord Nelson over the combined fleets of France and Spain on the 21st October 1805.—36, 9 N. 6, 1 W.

Truxillo, *troo-heel′yo*, a town in the province of Caceres; here Pizarro, the conqueror of Peru, was born in 1475. Pop. 9428.

Ubeda, *oo-bā′dā*, a town in the province of Jaen, near the Guadalquivir. Pop. 18,149.

Utrera, *oo-trā′rā*, a town in the province and 17 miles S.S.E. of Seville. The most ferocious bulls in Andalusia are reared in the neighbourhood. Pop. 15,093.

Valen′cia, an old maritime province in the E., now forming the provinces of Valencia, Alicante, and Castellon de la Plana; its valley, considered the garden of Spain, is covered with vines and olives. Pop. 1,401,833.

Valen′cia, a maritime city, the capital of the above province, near the mouth of the Guadalaviar; it is the seat of a university, and has a cathedral with some fine paintings. Pop. 143,856.—39, 29 N. 0, 24 W.

Valladolid′, Sp. pron. *văl-yă-dō-leed′*, the capital of a province of the same name, on the Pisuerga, a tributary of the Douro; it is the seat of a university. Pop. 52,206.—41, 39 N. 4, 42 W.

Velez-Malaga, *vā′leth-mă′lă-gă*, a town in the province of Malaga, situated in a fertile district near the mouth of the small river Velez, with some trade in oil, sugar, and wine. Pop, 24,332.

Vich, a town in the province of Barcelona, with considerable manufactures; there are copper and coal mines in the neighbourhood. Pop. 12,478.

Vi′go, a strong seaport in the province of Pontevedra, with an excellent harbour. P. 13,416.—42, 14 N. 8, 44 W.

Villa-Real, *veel′yă-rā-ăl′* (royal town), a town of Castellon de la Plana, on the Mejares, here crossed by a fine bridge of thirteen arches. Pop. 12,887.

Vito′ria, the capital of the province of Alava, in the Basque Provinces, the scene of a great victory by Wellington over the French in 1813. Pop. 25,039.—42, 51 N. 2, 43 W.

Vive′ro, a seaport town in the province and 46 miles N. of Lugo, on the Bay of Biscay. Pop. 11,345.

Xeres (Jeres), *hā′reth*, a flourishing town in the province of Cadiz, near the Guadalete, 14 miles N.N.E. of Cadiz; its vineyards produce the wine called *Sherry*. Pop. 64,533.—36, 41 N. 6, 7 W. —Another town of the same name in Badajoz, near the Ardila. Pop. 8463.

Xucar (Jucar), *hoo′kar*, a river which rises in Cuença, after leaving which province it flows through Albacete, then crosses Valencia, and falls into the Mediterranean.

Ye′cla, a town in the province and 41 miles N. of Murcia. It has many brandy distilleries. Pop. 15,276.

Zamora, *thă-mo′ră*, the capital of a province of the same name, on the Douro. Pop. 13,632.

PORTUGAL

Is bounded N. and E. by Spain; S. and W. by the Atlantic. Including the Azores and Madeira, which form an integral part of the kingdom, it contains 36,500 square miles, and a population of 4,740,000. The modern administrative divisions on the mainland are named after the chief towns in the several old provinces. In the following list the names of the chief towns are also the names of the modern administrative divisions.

Provinces.	Chief Towns.
Entre Douro e Minho	Oporto, Braga, Viana.
Tras-os-Montes	Braganza, Villa Real.
Beira	Coimbra, Aveira, Viseu, Guarda, Castello-Branco.
Estremadura	LISBON, Santarem, Leiria.
Alentejo	Portalegre, Evora, Beja.
Algarve	Faro.

Islands.	Chief Towns.
Azores	Angra, Ponta Delgada.
Madeira	Funchal.

Capes.—Roca or Rock of Lisbon, Espichel, St Vincent, St Maria.

Mountains.—Serra de Estrella.

Rivers.—Mondego, Douro and Tagus except the highest reaches, lower Minho, and Guadiana.

Foreign Possessions.—In Asia, five stations on the coast of India, and Macao in China; in Africa, Cape Verde Islands, Bissagos Islands off Senegambia, three islands in the Gulf of Guinea, Lower Guinea, Mozambique and Sofala on the east coast; in Oceania, Kambing Island and part of Timor Island in the East Indian Archipelago.

REMARKS.

Portugal lies, in the Iberian Peninsula, between 36° 56′ and 42° 10 N. lat., and between 6° 14′ and 9° 30′ W. long. Its extreme length is 350 miles; its greatest breadth, 140 miles.

Traversed by several mountain-ranges entering it from Spain, which fork out into minor ranges and send off spurs in all directions, Portugal is a land of mountain and valley. The highest range, Serra de Estrella, continuation of the Spanish Sierra de Guadarama, contains the highest summit in Portugal, 7524 feet above the ocean-level, and terminates in the giddy cliffs of Cabo da Roca,

or Rock of Lisbon. Generally, however, the mountains subside at some distance from the Atlantic, and the shores are for the most part low and marshy. The whole country lies within the limits of the Atlantic rains; and its many rivers are liable to destructive freshets. The only considerable river flowing wholly within Portuguese territory is the Mondego, which rises in a lakelet of the Serra de Estrella, and has a course of 100 miles. The country may be said to have two springs. Vegetation starts soon after the turn of the year, and is in full vigour early in February: that is the first spring. During the heat, and the almost equally continuous drought, which last from July far into September, small and tender plants die down; but these revive under the copious rains which then fall, and the fields are again covered with verdure and flowers: that is the second spring. Winter, which begins at the end of November, is a season of rains, winds, and thunderstorms.

In respect of farm and forest produce, internal means of communication, church and school, what has been said of Spain holds good of Portugal also. The Portuguese have not the proud bearing of the Spaniard; and the men of the north differ markedly from the men of the south. In the north, bluntness of manner goes along with industrious habits; in the south, politeness and indolence are found together. The Portuguese have made no republican experiments. Their hereditary monarchy is limited by a parliament called *Cortes Geraes*, which consists of a chamber of peers and a chamber of deputies. Their language is, like Spanish, a daughter of the Latin, but with a smaller admixture of Gothic and Arabic words. Their foreign trade is almost confined to England, which sends them all sorts of manufactured goods, and takes in return wine, fruits, olive oil, cork, and bay-salt. Port wine is so called from the port of shipment, Oporto, at the mouth of the Douro, the basin of which is the principal wine-growing region. The only other town surpassing Oporto in importance is LISBON, the capital, situated on the northern bank of the Tagus estuary, which is here five miles wide, and forms a magnificent harbour. The distant view is striking, because the site is hilly and the foliage luxuriant; but closer inspection reveals the dirty streets and mean structures which characterize Portuguese towns generally. The earthquake of Lisbon in 1755 is memorable both for its destructiveness to life and property, and for the great distances at which its throes were felt, as in the British Isles and the West Indies.

The Azores are a group of nine small islands 800 miles west of the mainland. They are so called because, when the Portuguese discovered them in 1439, birds, especially açores, *i.e.*, hawks, were the only inhabitants. They are volcanic and mountainous, with luxuriant vegetation; but, from the precipitous character of the mountains, they look barren at a distance. *St Michael*, the largest member of the group, gives name to the finest oranges. *Terceira*

contains Angra, residence of the governor. *Fayal* has the best harbour.

Madeira is the largest island of a group situated due west of Morocco, which the Portuguese colonized about the time when they discovered the Azores. It was so called, because they found it clothed with timber, in Portuguese *madeira.* The other members of the group, as *Porto Santo* and *Desertas,* are insignificant. The Madeira group resembles the Azores in volcanic origin, mountainous character, and luxuriant vegetation. Here, as there, wine and fruits are the chief produce; and equable warmth is the characteristic of the climate. For this reason it is that Funchal, capital of Madeira, is a great resort of invalids, particularly of consumptive patients, from November to June.

The foreign possessions of Portugal are described under Asia, Africa, and Oceania.

EXERCISES.

What are the boundaries of Portugal? Including the Azores and Madeira, what is its extent in square miles, and what its population? Into what provinces is the mainland divided? Name the chief towns in each. After what are the modern administrative divisions named? Name the insular portions of the kingdom, and the chief towns in each group. Name the capes, mountains, and rivers of the mainland.

Where are Evora, Oporto, Miranda, Braganza, Lisbon? etc. Where are Cape Espichel, Cape St Vincent, the Mondego? etc. How many stations has Portugal in Asia? How many of them are on the coast of India? Name the insular possessions of Portugal in Africa. Name her possessions on the African mainland. What possessions has she in Oceania?

Between what degrees of latitude and longitude is Portugal situated? What are its length and breadth? What is its general aspect? Trace the Serra de Estrella. Of what nature is the coast generally? Trace the river Mondego. What character belongs to it in common with other rivers in Portugal? Account for the double spring in Portugal. What weather prevails during the Portuguese winter?

Mention four or five particulars in which Spain and Portugal agree. In what respect do Spaniards and Portuguese differ individually? How do the Portuguese of north and south differ from one another? How does the Portuguese language differ from Spanish? What is the form of government in Portugal? What are the chief exports and imports? With what country does it chiefly trade? Why is port wine so called? Describe the situation of Lisbon. Give the date of its great earthquake. In what distant islands were the throes of that earthquake felt?

Where are the Azores? How did they get that name? Describe them generally. Mention something distinctive of St Michael, Terceira, and Fayal respectively.

Why was Madeira so called? In what respect does the Madeira group resemble the Azores? What is the chief produce? Name the capital of Madeira. What is the duration of the invalids' season?

DESCRIPTIVE TABLE.

Abran'tes, a fortified town in Estremadura, on the Tagus, the passage of which it commands. Pop. 6380.

Alemtejo, or Alentejo, *ā-leng-tā'zho* (beyond the Tagus), a large province S. of the Tagus. Pop. 374,503.

Algar've, a province in the south of the kingdom. Pop. 205,901.

Alma'da, a town in Estremadura, on the Tagus, opposite Lisbon. In its neighbourhood is the gold-mine of Adissa. Pop. 5091.

Almeida, *al-mā'e-da*, a fortress in Beira, on the N.E. frontier. Pop. 1881.

Aveiro, *ā-vā'e-ro*, a seaport of Beira, on the estuary of the Vouga, with considerable trade and fisheries. Pop. 7167.—40° 38′ N. lat. 8° 38′ W. long.

Azores'. Pop. 264,352. *See* Remarks, page 162. **An'gra**, the capital of the whole group, has a pop. of 11,263.

Beira, *bā'e-ra* (the river bank), a province N. of Estremadura and Alentejo, divided into Upper and Lower Pop. 1,390,747.

Beja, *bā'zha*, a town in Alentejo, with some ancient remains. Pop. 8487.

Be'lem, a town with a strong castle, 4 miles W. of Lisbon. Pop. 8237.

Bra'ga, an ancient city of Entre Douro e Minho, in a fertile valley; it is the see of an archbishop, who is primate of the kingdom. Pop. 20,258. —41, 33 N. 8, 22 W.

Bragan'za, an ancient town in Tras-os-Montes. From John, duke of Braganza, who was raised to the throne in 1640, the present royal family is descended. Pop. 5495.

Castel'lo-Bran'co, a strong town in Beira. Pop. 7464.

Chav'es, a frontier town in the N. of Tras-os-Montes, on the Tamega, much frequented for its mineral waters. Pop. 6524.

Cin'tra, a town in Estremadura, beautifully situated. It is noted for the convention between the British and French generals in 1808. P. 4810.

Coim'bra, the capital of Beira, situated on the Mondego. It has considerable commerce, and is the seat of the principal university in Portugal. Pop. 13,904.—40, 12 N. 8, 25 W.

Covilhã, *ko-veel'yang*, a town of Beira, at the foot of the Serra de Estrella, with cloth manufactures. Pop. 10,986.

Douro. *See* Spain, page 156.

El'vas, a frontier town in Alentejo, one of the most important strongholds in the kingdom. Pop. 11,206.—38, 52 N. 6, 57 W.

Entre Dou'ro e Min'ho, a province in the N., situated, as the name imports, between the rivers Douro and Minho. Pop. 1,015,394.

Espichel, Cape, *es-pe-shel'*, a promontory on the coast of Estremadura, with a lighthouse 660 feet above the level of the sea.—38, 25 N. 9, 13 W.

Estremadu'ra, an important maritime province in the W. Pop. 951,545.

Estremoz', a fortified town of Alentejo, in a fertile district. Pop. 7575.

Ev'ora, the capital of Alentejo, with several ancient remains. It is the see of an archbishop, and the seat of a university. Pop. 13,461.

Fa'ro, a seaport in Algarve, on the coast. Pop. 8671.—36, 59 N. 7, 51 W.

Figueira, *fe-gā'e-rā*, a fortified town in Beira, at the mouth of the Mondego. Pop. 4461.

Gavia'ra, the highest mountain in Portugal, in the N. of Entre Douro e Minho, 7881 feet above the sea.

Guadia'na. *See* Spain, page 157.

Guar'da, a fortified town in Beira, with an interesting cathedral, 70 miles E.N.E. of Coimbra. Pop. 5284.

Guimaraens, *ghe-mā-rā'ens*, an ancient but well-built town in Entre Douro e Minho, in a beautiful plain; it is surrounded by fortifications. Pop. 8205.

Lagos, *lā'goce* (on a large bay or lake), a fortified seaport of Algarve, with an excellent harbour. Pop. 7881. —37, 7 N. 8, 40 W.

Lame'go, a town in Beira, near the Douro. Pop. 8383.

Leiri'a, a small town of Estremadura, with eighteen churches, a cathedral, and three convents. Pop. 3705.

Lis'bon, *Port.* **Lisbo'a** (the walled town). Pop. 203,681.—38, 42 N. 9, 8 W. *See* Remarks, page 162.

Madei'ra (the woody island). Pop. 132,221. *See* Remarks, page 163.

Maf'ra, a town in Estremadura, with a convent and royal palace now falling into decay. Pop. 3231.

Miran'da do Cor'vo, a town in Beira, 10 miles S.E. of Coimbra. Pop. 5855.

Monde'go, a river which rises in the Serra de Estrella, and flows through Beira into the Atlantic.

Murto'sa, a seaport of Beira, on the estuary of the Vouga, 8 miles north of Aveiro. Pop. 9139.

Opor'to (O Porto, "the Port"), the ancient *Calle*, a seaport, the second city in the kingdom, in Entre Douro e Minho; it is finely situated on the Douro, about 2 miles from its mouth. It is noted for a strong red wine, which has received from it the name of *Port*. Pop. 89,295.—41, 9 N. 8, 37 W.

Ourique, *oo-re'kā*, a town in Alentejo, where Alfonso I. signally defeated the Moors in 1139. Pop. 3581.

Ovar', a thriving town in Beira, on the coast. Pop. 10,447.

Peniche, *pā-ne'shā*, a strong seaport in Estremadura, on a promontory. Pop. 2967.

Pombal', a town in Estremadura, on the Sour. Pop. 4478.

Pon'ta Delga'da, the largest town in the Azores, on the island of St Michael. A considerable trade is conducted, but the anchorage is bad. Pop. 17,940.—37, 40 N. 25, 36 W.

Portàle'gre, a town in Alentejo, with manufactures of cloth. Pop. 7207.

Povo'a da Varzim', a town in Entre Douro e Minho, near the coast, 18 miles S.W. of Braga. Pop. 11,004.

Ro'ca, Cape, or the **Rock of Lisbon**, the extreme western point of Estremadura and of the continent of Europe. — 38, 46 N. 9, 30 W.

Sa'do, a river which rises in the S. of Alentejo, and falls into the Bay of Setubal.

Santarem, *sán-tá-reng'*, an ancient town in Estremadura, on the Tagus. Pop. 7489.

Setubal', or **St Ubes**, a seaport in Estremadura, on the mouth of the Sado; it has a great trade in salt and fruits. Pop. 15,598.—38, 29 N. 8, 53 W.

Ser'ra de Estrel'la, a range of mountains in Beira, 7524 feet high.

Ta'gus. *See* SPAIN, page 159.

Tavi'ra, a fortified seaport in Algarve. Pop. 11,636.

Thomar', a town in Estremadura, with considerable cotton manufactures. Pop. 5196.

Tor'res-Ve'dras, a town in Estremadura, the centre of the celebrated military lines formed by the British under Wellington in 1810. Pop. 4926.

Tras-os-Mon'tes, a province in the N.E., separated from Spain by the Douro. Pop. 410,461.

Via'na, a seaport in Entre Douro e Minho, at the mouth of the Lima. Pop. 9249.—41, 42 N. 8, 43 W.

Villa Real, *veel'la rā-ál'*, a thriving town in Tras-os-Montes. Pop. 5525.

Vimiera, *ve-me-ā'rá* (the place of osiers), a town of Estremadura, celebrated for the victory gained by Wellington over Junot on the 21st August 1808. Pop. 551.

Vin'cent, Cape St, a promontory on the S.W. coast of Algarve, famous for the victory gained over the Spanish fleet, on the 14th February 1797, by the British under Sir John Jervis, afterwards Earl St Vincent.—37, 3 N. 8, 59 W.

Viseu, *ve'sā-oo*, a town in Beira, with a great annual fair. Pop. 7242.

SWITZERLAND

Is bounded N. by Germany; W. by France; S. by France and Italy; E. by Italy and Austria. It contains 15,727 square miles, and a population of 2,850,000.

Divisions.—Switzerland is divided into cantons and half-cantons, numbering twenty-five :—

Cantons.	Chief Towns.	Cantons.	Chief Towns.
Schaffhausen	Schaffhausen.	Solothurn	Solothurn.
Thurgau	Frauenfeld.	Bern	BERN, Thun.
Zurich	Zurich.	Lucerne	Lucerne.
Aargau	Aarau.	Zug	Zug.
Basel, city	Basel.	Schwytz	Schwytz.
„ country	Liesthal.	St Gall	St Gall.

Cantons.	Chief Towns.	Cantons.	Chief Towns.
Appenzell—		Neuchâtel	Neuchâtel.
Outer Rhodes	Appenzell.	Vaud	Lausanne, Vevay.
Inner Rhodes	Herisau.	Geneva	Geneva.
Glarus	Glarus.	Valais	Sion.
Uri	Altorf.	Ticino	Bellinzona, Lugano, Locarno.
Unterwalden—		Grisons	Coire, Ilanz, Davos.
Upper	Sarnen.		
Lower	Stanz.		
Freiburg	Freiburg.		

Mountains.—Pennine Alps, embracing Monte Rosa, Mont Cervin or Matterhorn, Simplon, and Great St Bernard; Helvetian or Lepontine Alps, including St Gothard; Rhætian Alps; Bernese Alps, the culminating points of which are the Finster-Aarhorn, Mönch, Jungfrau, Wetterhorn, and Schreckhorn; Mount Jura.

Lakes.—Brienz, Thun, Neuchâtel, Bienne, Lucerne, Zug, Zurich, Wallenstadt; and in part Geneva, Constance, Maggiore, Lugano.

Rivers.—Upper Rhine, with its tributary the Aar; Upper Rhône; Ticino, tributary to the Po; Inn, tributary to the Danube.

REMARKS.

Switzerland is situated between 45° 50′ and 47° 50′ N. lat., and between 6° and 10° 30′ E. long. Its length, from Mount Jura to the Tyrol, is 200 miles; its breadth, from Como to the Rhine at Schaffhausen, 130 miles.

Switzerland is the most mountainous country in Europe. The Alps form not only its southern and eastern frontiers, but cover so much of its interior as to be identified with Switzerland more than with any other country. Yet Mont Blanc, the highest of the Alps, is outside Switzerland, on the confines of France and Italy. On the other hand, Switzerland possesses in the St Gothard group the head of drainage for Central Europe, *i.e.*, for Europe apart from its peninsulas and from Russia, for in that group are the sources of the Rhine, which flows into the North Sea; of the Rhône, which flows into the Mediterranean; of the Ticino, which by the Po pours its waters into the Adriatic; and of the Inn, which by the Danube pours its waters into the Black Sea. St Gothard belongs to the Helvetian or Lepontine Alps, part of the southern and higher chain, which is continued eastward beyond St Bernard in the Rhætian Alps, and westward beyond Monte Rosa in the Pennine Alps. North of the higher chain, and parallel to it on the whole, is another which, starting from the northern edge of the St Gothard group, runs north-eastward, and under the well-known name of

Bernese Alps, south-westward. The highest of the Bernese Alps is the Finster-Aarhorn, 14,026 feet, from which starts the Aar, by far the largest river wholly Swiss; but the highest mountains within Swiss borders belong to the main chain, and are

Grabenhorn or Dôme, 14,938 feet; Matterhorn or Mont Cervin, 14,836 feet.

Monte Rosa, inferior only to Mont Blanc, and, like it, belonging to the main chain, rises on the confines of Switzerland and Italy. The southern and south-eastern cantons, then, are mountainous in the highest degree; those in the north-west are only hilly; and the great valley between the Jura range, which separates Switzerland from France in that direction, and the Bernese Alps is comparatively a plain.

Switzerland is called the playground of Europe, because of the crowds of tourists annually attracted by the variety, the beauty here, the grandeur there, of its scenery. Each neighbourhood has its own objects of interest—gorges, waterfalls, points of view, historical sites or monuments—while everywhere the solitude and perennial snow of the highest mountains contrast with the glowing summer and busy haunts of men below. In the course of a single day the tourist can pass from one extreme to the other. In ascending, the tourist leaves successively behind him the vine, walnut, and other fruit-trees; plantations of beech, with crops of barley, oats, and potatoes; the pine forest; and, lastly, mere pasture, which carries flowers as well as verdure up to the limits of snow and ice. Only in the canton of Ticino, south of the Alps, does the olive ripen: there also the mulberry is grown for the production of silk, and maize is the principal grain-crop. Remarkable, too, is the accessibility of the finest scenery. Roads have been carried up gorges and along mountain sides: panoramic views are obtained from mountain-hotels reached by bridle-paths: glaciers descend into some valleys far enough to be within easy reach from the nearest village: steamers call at a multitude of places on every considerable lake: on Rigi mountain, situated between lakes Lucerne and Zug, two railways on a peculiar principle have been established, one from each of the above-mentioned lakes to the top, and a third railway traverses the ridge from the top to a lower summit. In this connexion may be mentioned the St Gothard railway-tunnel, which is wholly in Swiss territory, penetrating the Alps from Göschenen in Uri to Airolo in Ticino, a distance of 9¼ miles.

Corn is imported; cattle and cheese are exported. The great difficulty is to keep a sufficient stock of cattle throughout the winter; accordingly the peasant devotes himself in summer to the collection of fodder. In the walnut region, he gets two cuttings of hay from his meadow; higher up, he makes hay of patches of grass inaccessible even to the goat, and throws it down the precipice, to be carried home from some convenient spot. He even strips trees of their leaves and potatoes of their stalks, being able to

make these also into a sort of hay, thanks to the extreme dryness of the air. Such are the intelligence and industry of the Swiss, that they compete with countries situated nearer the sea or on it, and possessing greater mineral wealth, in the manufacture of woollen, cotton, and silk goods. Some ascribe this success to the excellent organization and practical aims of Swiss schools, particularly to the establishment in the principal towns of technical schools, crowned by a polytechnicon, now of European fame, at Zurich. Important industries are jewellery in the city of Geneva, watchmaking in the cantons of Geneva and Neuchâtel, wood-carving and inlaid wood-work in the Bernese Oberland, and embroidery in the Inner Rhodes of Appenzell.

As regards its inhabitants, Switzerland offers a remarkable instance of unity in diversity. Four languages are spoken within its borders—German in fourteen cantons; French in three, viz., Geneva, Neuchâtel, and Vaud; both German and French in other three, Bern, Freiburg, and Valais; Italian in Ticino; and in Grisons, besides German and Italian, the *Romansch*, a dialect less removed from Latin than either French or Italian. This diversity of language accounts for the diversity of form in the names of places in Switzerland. In the list of cantons above given, the names are printed according to the usage on the spot, except in the case of Grisons, which is the French form, and of Geneva (Fr. Genève, Ger. Genf), which is the English form. To this diversity of language corresponds pretty nearly the diversity of race. In religion also the Swiss are divided, three-fifths of them being Protestants of the Reformed Church, with a Presbyterian organization, and two-fifths Roman Catholics. The cantons around the lake of Lucerne, as also Valais and Ticino, are almost wholly Roman Catholic; elsewhere Protestantism prevails. Material interests create another diversity, illustrated by the breaking up of canton Basel into two half-cantons, the city half and the country half. In the case of Appenzell, difference of religion combined with difference of material interests to separate the industrial Protestant population of the plain (Outer Rhodes) from the pastoral Roman Catholic population of the mountain (Inner Rhodes). On the other hand, the necessities of life in a mountainous country, and the events of history, have impressed on the Swiss as a people one character, which includes simplicity, frugality, honesty, bravery, strong attachment to home, and fidelity to whoever may be paymaster. In spite of a law to the contrary, many Swiss still take service in foreign armies, especially in the Dutch East Indies. The cantons and half-cantons, self-governing for local purposes, have all a common interest in respect of foreign powers; and, whatever their mutual jealousies, they loyally unite in maintaining a federal republic. The Federal Assembly, which is the legislative body, consists of a national council and a senate: the members of both are elected by the cantons and half-cantons. The executive power belongs to the Federal Council, the members of

which are elected by the Federal Assembly. There is also a Federal Tribunal, which decides between contending cantons, between a canton or cantons and the whole confederation, also between the confederation or single cantons on the one part, and corporations or individuals on the other. The Swiss government is thus a Federal Republic without a president. The seat of the Federal Tribunal is Lausanne; that of the political assemblies is BERN, which is therefore considered the capital of Switzerland. The name is explained by the German *Bären*, *i.e.*, Bears: certainly the bear figures on the cantonal buildings, and a bear-pit is maintained at the public expense. The architecture of the town is massive on the whole, and portions of it, particularly the quaint fountains, recall its mediæval origin.

EXERCISES.

What are the boundaries of Switzerland? What is its extent in square miles? What population does it contain? Into how many cantons and half-cantons is it divided? Name them. What are the principal towns? Name the mountains; the lakes; the rivers. Where is Frauenfeld, Stanz, Lugano, Altorf, Coire? etc. Where does the Rhine rise? Trace its course. Where is Lake Brienz? Where are Mount St Gothard, Great St Bernard, Schreckhorn, Jungfrau, Mount Jura, Lake of Constance, Lake Wallenstadt? etc.

Between what degrees of latitude and longitude is Switzerland situated? What is its length and breadth? What is its general appearance? What part of it is occupied by the Alps? Where is Mont Blanc? Show that the Mount St Gothard group is the head of European drainage. By what rivers outside Switzerland does some of its drainage go to the Mediterranean and the Black Sea respectively? Name the largest river wholly Swiss, and say how its waters reach the sea. Between what two mountains do the Lepontine Alps extend? From which of these mountains do the Rhætian Alps extend eastward, and from which the Pennine Alps westward? Are the highest summits in the northern or in the southern chain? Name the highest two summits in Switzerland, and the highest of the Bernese Alps. Why is Monte Rosa not reckoned among the Swiss mountains? Between what ranges do the lowlands of Switzerland lie?

Why is Switzerland called the playground of Europe? Describe the attractions of Swiss scenery. Mention five regions passed through in ascending to perennial snow. With which of them are grain-crops associated? What are the special products of the canton Ticino? Mention facts illustrating the accessibility of the finest scenery. What about the three railways on the Rigi? Between what two lakes is that mountain situated?

How do the Swiss maintain their cattle in winter? Mention two disadvantages under which the Swiss labour in respect of manufactures. In what goods do they nevertheless compete with nations more favourably situated? To what is their industrial success ascribed by some? Where is their polytechnicon? What industries are carried on in the city of Geneva, in the cantons of Geneva and Neuchâtel, in the Bernese Oberland, and in the Inner Rhodes of Appenzell respectively?

What four languages are spoken in Switzerland? Name the three French cantons, and the one Italian. How many German cantons are there? Of what nature is Romansch, and in which canton is it spoken? Which canton has a name in English different from the French and German forms? In what proportions is the population divided between Protestantism and Roman Catholicism? Of what nature is Swiss Protestantism? What causes led to the breaking up of Basel and Appenzell into half-cantons? Enumerate the qualities of the Swiss character. In what distant region are the Swiss found in considerable numbers as soldiers? What are the functions of the Federal Assembly, the Federal Council, and the Federal Tribunal respectively? Which of these bodies corresponds to the British Parliament? To what among us does the Federal Council correspond? Where does the Federal Tribunal sit? What town is the political capital of Switzerland? Account for the name of the town. What is the general effect of its architecture?

DESCRIPTIVE TABLE.

A'ar (flowing or sounding water), a river which, rising in Bern, and flowing through the lakes of Brienz and Thun, joins the Rhine.

Aar'au, the capital of Aargau, on the Aar. Pop. 5944.

Aar'gau, or **Argo'via**, a canton in the N., which derives its name from the Aar. Pop. 198,645.

Alps. *See* REMARKS, page 166.

Al'torf (old farm or town), the capital of Uri, situated on the Reuss, famous for the heroic resistance of William Tell to the tyrant Geisler in 1307, which laid the foundation of the independence of Switzerland. Pop. 2901.

Appenzell, *ăp-pen-tsel'* (abbot's church), a canton in the N.E. Pop. 64,799.

Appenzell, the capital of the canton, situated on the Sitter, a tributary of the Rhine. Pop. 4302.

Basle, Bâle, or **Ba'sel**, a frontier canton in the N.W. Pop. 124,372. It is subdivided into two cantons, of which Bâle-Ville has a pop. of 65,101, and Bâle-Campagne a pop. of 59,271.

Basle, the capital of the canton, on the Rhine, a place of great trade, and the seat of a university. Pop. 61,399.—47° 33' N. lat. 7° 35' E. long.

Bellinzo'na, a town in the canton of Tessin, which, alternately with Locarno and Lugano, becomes the seat of government of the canton for six years together. Pop. 2436.

Bernard', Great St, Fr. pron. *seng ber-năr'*, a mountain and mountain-pass in the chain of the Alps, in the south of the Valais. Almost on the very crest of the latter stands a celebrated hospice, occupied by some Augustine monks, who, with their valuable dogs, are ever ready to succour travellers overtaken by snow-storms or overpowered by intense cold. The mountain rises to the height of 11,116 feet, and the hospice stands at an elevation of 8150 feet above the level of the sea.

Bern, or **Berne** (a bear), a large canton in the interior. Pop. 532,164.

Bern, or **Berne**, the capital of Switzerland. Pop. 44,087,—46, 57 N. 7, 26 E. *See* REMARKS, page 169.

Bienne, *be-enn'*, a flourishing commercial town in the canton and 17 miles N.W. of Bern, at the northern extremity of Lake Bienne. Pop. 11,623.

Brienz, Lake of, *bree'ents*, in Bern, surrounded by lofty mountains.

Cervin, Mont, *mong ser-veng'*, or **Matterhorn**, a peak of the Pennine Alps, 40 miles E.N.E. of Mont Blanc.

Chaux-de-Fonds' (La), a parish and town in the canton and 9 miles N.W. of Neuchâtel. It is situated at the foot of a gorge of the Jura, 3070 feet above the level of the sea, and is the principal seat of the watch manufacture in the canton. Pop. 22,456.

Coire, *kwăr*, or **Chur**, *koor*, the capital of the Grisons, near the Rhine. Pop. 8889.

Con'stance, Lake of, or **Bo'den See**, in the N.E., between Switzerland and Germany.

Da'vos Platz', a town in the canton of Grisons, 15 miles E.S.E. of Coire. It stands 5105 feet above the level of the sea, and the salubrious atmosphere

of the neighbourhood exercises a curative influence on certain forms of pulmonary disease. Pop. 3561.

Engadine, *en-gā-deen′*, an extensive valley in the canton of Grisons, extending for about 50 miles along the banks of the Inn. Pop. about 12,000.

Frauenfeld, *frou′en-felt* (our lady's field), the capital of Thurgau, situated on a branch of the Thur. Pop. 5811.

Frei′burg, a canton W. of Bern. Pop. 115,400.

Frei′burg, or **Fri′bourg** (the privileged city), the capital of the canton, romantically situated on the Saane. Pop. 11,546.

Gene′va, a small canton in the S.W. Pop. 101,595.

Gene′va, the capital of the canton, finely situated at the point where the Rhône issues from the lake. In some respects it may be regarded as one of the most important cities in Europe. It was here that Calvin resided while he laboured in establishing the Reformation. It is the birthplace of many eminent men, and the seat of a Protestant university. Pop. 50,043.—46, 12 N. 6, 9 E.

Gene′va, or **Lem′an, Lake of**, the largest in Switzerland, traversed by the Rhône. Its scenery is beautiful.

Glarus, *glā′roos*, a small canton in the interior. Pop. 34,213.

Glarus, the capital of the above canton, a thriving manufacturing town, on the Linth. Pop. 5330.

Grisons, *gree-zong′* (the gray allies), a large canton in the S.E., traversed by the valley of the Engadine. Pop. 94,991.

Herisau, *hā′re-so*, a manufacturing town in Appenzell. Pop. 11,082.

Inn, a tributary of the Danube, which rises in the Grisons, and flows by a N.E. course through the Tyrol. At its confluence with the Danube it is larger than the Danube itself.

Jungfrau, *yoong′frou* (the maiden), one of the Alps, in the canton of Bern, rising to the height of 13,720 feet.

Ju′ra, Mount. *See* FRANCE, page 143.

Lausanne, *lo-zān′*, the capital of the canton of Vaud, about a mile N. from the lake of Geneva. The beauty of its situation has made it the resort of numerous strangers. Here Gibbon wrote the greater part of his History of the Decline and Fall of the Roman Empire. Pop. 30,179.

Lauterbrunnen, *lou′ter-broon′nen*, or **Lauterbrunn** (clear wells), a remarkable valley in Bern, where the glaciers appear in great magnificence.

Lim′mat, a river which rises in Glarus, passes through the Lake of Zurich, and falls into the Aar near its junction with the Reuss.

Locar′no, a town in the canton of Tessin, beautifully situated on Lake Maggiore. Pop. 2645.

Locle′, a town in the canton and 9 miles W.N.W. of Neuchâtel. The manufacture of clocks and watches is actively carried on. Pop. 10,464.

Lucerne′, a canton in the interior. Pop. 134,806.

Lucerne′, the capital of the canton, situated on an arm of the lake, where the Reuss issues from it. Pop. 17,850.

Lucerne′, Lake of (the lake of the four forest cantons), a beautiful and romantic lake, surrounded by the four forest cantons, Schwytz, Uri, Unterwalden, and Lucerne.

Luga′no, a town in the canton of Tessin. Pop. 6129.

Morat′, a town in Freiburg, where Charles the Bold, Duke of Burgundy, was signally defeated by the Swiss in 1476. Pop. 2364.

Neuchâtel, *nush-ā-tel′*, a canton in the W., bordering on the lake of the same name, which separates it from the canton of Freiburg; until 1857 it was nominally subject to the King of Prussia. Pop. 103,732.

Neuchâtel (new castle), the capital of the canton, beautifully situated on the lake, and commanding grand and extensive views. Pop. 15,612.

Ol′ten, a town in the canton of Soleure, on the Aar. Pop. 3979.

Reuss, *roice*, a large river which issues from a lake in Mount St Gothard, flows through Uri, the Lake of Lucerne, and Aargau, and joins the Aar.

Rigi. *See* REMARKS, page 167.

Rhône. *See* FRANCE, page 146.

Ro′sa, Monte, the highest mountain on the confines of Switzerland and Italy, being 15,208 feet above the sea.

St Gall, a canton S. of the Lake of Constance. Pop. 210,491.

St Gall, the capital of the canton, in a pleasant valley, with extensive manufactures. It takes its name from an Irish missionary, who founded a monastery here in the seventh century. Pop. 21,438.

St Gothard, Mount, between Uri and Tessin. The Furca peak is 14,037 feet high; the height of the pass is 6890 feet. A railway tunnel has been

constructed through the mountain, 112 feet more than 9½ miles long.

Sar'nen, a town in Unterwalden, on the Lake of Sarnen. Pop. 4039.

Schaffhau'sen, the most northerly canton. Pop. 38,348.

Schaffhau'sen, the capital of the canton, a place of considerable trade. The fall of the Rhine here is one of the greatest cataracts in Europe. Pop. 11,795.

Schreck'horn (the peak of terror), one of the Alps, in the canton of Bern, rising to the height of 13,492 feet, remarkable for its glaciers.

Schwytz, *shwits*, a pastoral canton on the E. of the Lake of Lucerne. Here the Swiss confederacy was first formed in 1307, and the canton has given its name to the whole country. Pop. 51,235.

Schwytz, the capital of the above canton, situated amid beautiful scenery. Pop. 6543.

Simplon, *seng-plong'*, one of the Alps, over which Napoleon I. constructed a famous military road into Italy. The pass which leads from the Valais to Milan is 6592 feet above the sea.

Sion, *se-ong'*, or **Sit'ten** (the seat at the hill fort), the chief town of the Valais, situated on the Rhône. Pop. 4871.

Soleure', or **Sol'othurn**, a canton in the N.W. Pop. 80,424.

Soleure', the capital of the canton, on the Aar. Pop. 7668.

Splü'gen, one of the Alps, across which is a pass, 6946 feet high, leading from the Grisons to Chiavenna and the Lake of Como.

Stanz, *stânts* (the stony place), the capital of Unterwalden. Pop. 2210.

Tessin, *tes'seng*, or **Ticino**, *te-che'no*, a canton in the S., deriving its name from the river Ticino, which flows through it into Lake Maggiore. Pop. 130,777.

Thun, *toon*, a lake in the canton of Bern, united with the Lake of Brienz by the Aar.

Thun, *toon*, a town in Bern, on the Lake of Thun, where the Aar issues from it. Pop. 5124.

Thurgau, *toor-gou'*, or **Thurgo'via** (the district of the Thur), a canton in the N.E., on the Lake of Constance. Pop. 99,552.

Tro'gen, a thriving town in the canton of Appenzell. Pop. 2629.

Unterwalden, *oon-ter-vâl'den*, and **Uri**, *oo're*, two of the forest cantons, on the Lake of Lucerne. Pop. 51,042.

Valais, *vâ-lā'* (the district of valleys), a canton containing most of that portion of the Rhône valley which lies above the Lake of Geneva. Pop. 100,216.

Vaud, *vo* (the valley), a fine canton on the N. of the Lake of Geneva. Pop. 238,730.

Vevay', a beautiful town in the canton of Vaud, on the Lake of Geneva. Pop. 7820.

Wallenstadt, *vâl'len-statt* (the town of the foreigners), a lake between St Gall and Glarus, connected with the Lake of Zurich by the Linth Canal.

Winterthur, *vin'ter-toor*, a manufacturing town in the canton and 12 miles N.E. of Zurich. Pop. 13,595.

Yverdun, *ee'ver-dung* (a town near the water), a town in the canton of Vaud, at the S. extremity of the Lake of Neuchâtel. Pop. 5968.

Zug, *tsoog*, a small canton in the interior. Pop. 22,994.

Zug, the capital of the canton, on the Lake of Zug. Pop. 4924.

Zurich, *zu'rik*, a canton in the N., with a lake of the same name. Pop. 317,576.

Zurich, the capital of the above canton, on the Limmat, where it issues from the lake. It is the seat of a university and of several polytechnic schools. Here the reformer Zuinglius lived from 1518 to 1531. Pop. 25,102.—47, 22 N. 8, 32 E.

ITALY

Is bounded N. by the Alps, which separate it from Austria and Switzerland; W. by France and the Mediterranean; S. by the Mediterranean; E. by the Adriatic. Including Sicily and Sardinia, it contains 114,445 square miles, and the population is about 26,807,000.

Divisions.—The modern administrative divisions are named after the chief towns in the several old provinces (*compartimenti territoriali*). In the following list the names of the chief towns are also the names of the modern administrative divisions:—

Provinces.	Chief Towns.
Piedmont	Alessandria, Cuneo, Novara, Torino (Turin).
Liguria	Genova (Genoa), Porto Maurizio.
Lombardy	Bergamo, Brescia, Como, Cremona, Mantova (Mantua), Milano (Milan), Pavia, Sondrio.
Venetia	Belluno, Padova (Padua), Rovigo, Treviso, Udine, Venezia (Venice), Verona, Vicenza.
Emilia	Bologna, Ferrara, Forli, Modena, Parma, Piacenza, Ravenna, Reggio (nell' Emilia).
Umbria	Perugia.
Marca (The Marches)	Ancona, Ascoli, Macerata, Pesaro and Urbino.
Tuscany	Arezzo, Firenze (Florence), Grosseto, Livorno (Leghorn), Lucca, Massa and Carrara, Pisa, Siena.
Latium	Roma (Rome).
Abruzzi and Molise	Aquila, Campobasso, Chieti, Teramo.
Campania	Avellino, Benevento, Caserta, Napoli (Naples), Salerno.
Puglia	Bari, Foggia, Lecce.
Basilicata	Potenza.
Calabria	Catanzaro, Cosenza, Reggio (di Calabria).
Sicily	Caltanisetta, Catania, Girgenti, Messina, Palermo, Siracusa (Syracuse), Trapani.
Sardinia	Cagliari, Sassari.

Islands.—Sardinia, Sicily, Lipari Islands, Capri, Ischia, Elba.

Straits.—Bonifacio, Messina, Otranto.

Gulfs.—Genoa, Gaeta, Naples, Salerno, Policastro, St Eufemia, Squillace, Taranto, Manfredonia, Venice, Trieste.

Capes.—Spartivento, Colonne, Leuca, Gargano, Passaro.

Mountains.—Part of the Alps, the Apennines, Mount Vesuvius, Mount Etna.

Lakes.—Como, Iseo, Perugia, Bolsena, almost the whole of Maggiore and Garda, and part of Lugano.

Rivers.—Po, Lower Adige, Arno, Tiber, Volturno.

REMARKS.

Italy, including Sicily, extends from 36° 40′ to 46° 40′ N. lat., and from 6° 40′ to 18° 30′ E. long. The greatest length of the peninsula, from Mont Blanc to Cape Leuca, is 750 miles; its extreme breadth, from the head of the Adriatic to the borders of

Savoy, is 370 miles; but its average breadth does not exceed 140 miles.

Along most of its northern frontier, the Italian peninsula is walled off from the rest of the European continent by the southern and higher chain of the Alps, in which rise Mont Blanc and Monte Rosa, huge boundary-stones in the direction, the former of France, the latter of Switzerland. The Alps, on approaching the Mediterranean, curve eastward within Italian territory, under the name of Maritime Alps, and then pass into the Apennines, which run down the whole length of the peninsula, first seeking the eastern coast, which they leave at the spur of the *boot*, as lower Italy has been called from its shape, then crossing to the toe. The highest summit of the Apennines is nearly in the middle of their length, Monte Corno, 10,206 feet, in the Abruzzi highlands. The Alps and the Apennines determine the interior configuration of the mainland. Between them in the north lies the valley of the Po, the most fertile plain in Europe, often called, from the province occupying its centre, plain of Lombardy, with extensive rice-fields, and meadows that yield six mowings in the year. The Po is by far the longest and largest Italian river; but, though navigable to within 60 miles of its source in Monte Viso, one of the Cottian Alps, it is little navigated, because of its rapid current, maintained throughout winter by heavy rains, and throughout summer by the melting of snow on the Alps. From Piacenza, the channel is contained within embankments; and near to Ferrara, where the joint delta of the Po and Adige begins, the surface of the water within the embankments is 30 feet above the adjacent land. Throughout the rest of the peninsula, lateral valleys prevail, narrow and straight on the eastern side of the Apennines, so that the many rivers are but torrents, wider and sometimes winding, on the western side, so that the fewer rivers are greater in both length and volume. Of the torrents on the eastern side, the only notable one is the Fiumicino, and that merely because it is the ancient Rubicon. Of the rivers on the western side, the Tiber and the Arno are navigable to a considerable distance inland, and are connected by a canal, only a gentle undulation separating their upper basins. These basins form, indeed, one plain, the seaward portion of which, notorious as the Maremma of Tuscany, the Campagna of Rome, and the Pontine Marshes farther south, is pestilential. The marshes of the Po delta represent the intermediate stage between lagoons and dry land; and so great are the annual additions to the surface, that the dry land advances seaward at the rate of 32 feet per annum. Hence it is that the town of Adria, which was a naval station under the Roman emperors, and important enough to give name to the Adriatic, now stands 16 miles inland on a branch of the Adige. To the repulsive aspect of these parts of the coast, Italy supplies the greatest possible contrast in the charming Riviera, as the coast of the Gulf of Genoa is called, and in the Bay of Naples, where the landscape, as seen from the

sea, offers one of the most striking views in the world. A like contrast exists between the Tuscan lakes of Perugia and Bolsena, with their tame shores, and the lakes at the foot of the Alps in Lombardy, or on its frontiers, with their lofty mountains and rich vegetation.

Italy is pre-eminently a land of corn and wine, and oil and silk; one might add, "of milk and honey." The corn is chiefly maize—wheat, indeed, is imported; and maize-meal porridge, called *pollenta*, is the staple food of the peasantry. The wines are generally inferior to those of France, because the Italians, relying on the superiority of their climate and soil, are comparatively careless in cultivating the grape, and in manufacturing its juice. On the other hand, the olive-oil of Tuscany is the best in the world. The butter of Lombardy is sent to great distances, and Parmesan cheese is famed. Of the raw silk, some is manufactured in the north of Italy, and a great deal is exported, especially to France and Switzerland. Owing partly to the almost total absence of coal, manufactures are nowhere on a large scale. The plaited straw industry is characteristic of Tuscany; that of gold and silver wares flourishes in all the large centres of population. The statuary marble of Carrara, in Tuscany, is largely exported; and Italy alone, of European countries, yields boracic acid, the preparation of which from native aqueous solutions, by means of volcanic heat, is a regular industry at Volterra, Tuscany. But, on the whole, Italy is poor in useful minerals. The general character of the climate may be inferred from the productions. The proverbial beauty of the Italian sky is due to the clearness of the air. Winter—which in the valley of the Po, notwithstanding its semi-tropical productions, is colder, if also of shorter duration, than in the British Isles—is a rainy season farther south, especially on the western side of the Apennines, but so mild as to attract invalids from the north. In summer, the western coast is exposed to the sirocco from Africa, which makes all life droop; and in winter, most places are swept by cutting winds from the mountains.

The Italians are a very mixed race. When ancient Rome conquered Italy to the Alps, she brought under her sway Gauls in the north, and Greeks in the south, with many aboriginal tribes between. Since then, Goths and Lombards, Teutonic tribes, have settled in the north; Arabs, Albanians, and Normans in the south. Yet a unity has been achieved, thanks to a common literary language formed under the influence of Dante, Petrarch, and Boccaccio; a common religion, the Roman Catholic; and common political aspirations. The only native Protestants are the Waldenses, occupying a few valleys behind Turin; and they are said to be the descendants of refugees from the canton of Vaud, Switzerland. By a series of wonderful events during the ten previous years, the King of Sardinia became in 1866 the sovereign of all Italy, excepting a remnant of the Papal States, including Rome; and when, in 1870, that remnant also was placed by a plebiscite

under his sway, the temporal power of the Pope was ended, the kingdom of Italy was completed, and ROME became its capital. This famous city is situated on both banks of the Tiber, 13 miles above its mouth, where the left bank is so low as to be overflowed. This flat is the site of the ancient Campus Martius, and of the most densely peopled portion of the modern city: it is traversed from north to south by the Corso, the longest and busiest of the Roman streets. The historic "Seven Hills" were all on the left bank, and one of them, the Quirinal, gives name to the royal palace. Several of them are still chiefly occupied by market-gardens and vineyards. The Pincio, a height laid out as a public promenade, is also on the left bank of the river; but the castle of San Angelo, the Vatican palace, where the Pope resides, and St Peter's, the grandest church in the world, are all on the right bank. Besides being a place of pilgrimage to Roman Catholics, Rome attracts crowds of tourists by the fame of its historical sites, as the *forum;* of its ruins, of which the Coliseum is the most conspicuous; of its churches, catacombs, art-galleries, and public fountains.

Some friction was inevitable between the Papal court and the Italian government, which has been smoothed by generosity on the part of the latter. Besides paying to the Pope sovereign honours, and leaving all Church patronage in his hands and in those of his subordinates, it allows him £129,000 a year, and leaves him, without liability to taxation, in possession of the Vatican, of another palace called the Lateran, on the left bank, and of the villa of Castel Gandolfo on the Alban Lake. The government is a monarchy, hereditary in the House of Savoy, and limited by a parliament, consisting of a senate and chamber of deputies. Monasteries and convents having been abolished, and the theological faculty in the seventeen national universities suppressed, a Papal university has been established in Rome. Elementary instruction is obligatory; but the law which makes it, being in advance of the general feeling in the country, is not enforced. Generations must pass before the Italian of the south can be raised to the level of his fellow-countryman of the north, in respect of information, intelligence, and industrious habits. One undoubted proof of national prosperity has lately been given in the abandonment of a forced paper currency, and the return to specie payments.

Sicily and Sardinia are physically similar to the mainland, but less advanced in all that belongs to modern civilisation. Sicily is traversed by a range which is apparently a continuation of the Apennines; and Sardinia by a longitudinal range, which is apparently a continuation of the Corsican mountains. The sulphur of Sicily, and the lead or galena of Sardinia, are characteristic products.

EXERCISES.

What are the boundaries of Italy? Including Sicily and Sardinia, what is its extent in square miles, and what its population? Into how many provinces is the Kingdom of Italy divided? What are the chief towns of Piedmont? Of Liguria? Of Sardinia? Of Lombardy? Of Emilia? Of Tuscany? Of the Marches? Of Abruzzi and Molise? Of Campania? Of Sicily? Of Venetia? Of Calabria? Where are Rome, Padua, Turin, Leghorn, Palermo, Siena, Savona, Catania, Pisa, Piacenza, Pavia, Cremona, Cagliari, Girgenti, Genoa? etc. Distinguish between the two towns called Reggio.

What are the principal islands? Name the straits of Italy. Name its gulfs. Name its capes. What are its principal mountains? What are its lakes? Which three of the lakes are not wholly within the Italian border? Name its rivers, and trace their courses. Where are Cape Colonne, the Gulf of Gaeta, the Lake of Como, the Straits of Messina, the Gulf of Salerno, Lake Perugia, Mount Vesuvius, Cape Leuca? etc.

Between what degrees of latitude and longitude is Italy, including Sicily, situated? What are its greatest length and breadth? What is its average breadth? Between what countries and Italy do Mont Blanc and Monte Rosa respectively stand? What Alpine range joins on to the Apennines? Describe the course of the Apennines. What and where is their highest summit? What capes mark respectively the spur, the tip of the heel, and the tip of the toe, of the Italian *boot?* Describe the course of the longest and largest Italian river. What about its channel from Piacenza downwards, particularly at Ferrara? At what rate is the sea being turned into land at its mouth? Show the greatness of the result by the case of Adria. What other river joins with the Po in forming a delta? Mention a fact showing the great fertility of the plain of Lombardy. What grain is grown there, because the fields can be inundated? Wherein do the lateral valleys on opposite sides of the Apennines differ? What makes the Fiumicino on the eastern side notable? What two rivers on the western side are connected by a canal? What three districts form a continuous malarious region on the western side? What two portions of the coast are admired for scenery, particularly as seen from the sea? Contrast the Alpine lakes with those of Tuscany. Of the lakes called Italian, find out which two are partly Swiss, and which one is partly Austrian.

What grain is imported into Italy? What is *pollenta?* Why are the wines of Italy inferior to those of France? Name an article in the production of which Italy excels all other countries; also one which it alone, of European countries, produces. What countries take most of its raw silk? What industry is characteristic of Tuscany? What wares are manufactured in all the large centres of population? Where does the best statuary marble come from? Contrast winter in the plain of Lombardy with winter in southern Italy. What winds have to be guarded against in summer and in winter respectively?

Name two of the races settled in ancient Italy that were subjugated by the Romans. What nationalities have in comparatively modern times settled in the north and south respectively? In what three particulars are Italians one? Who and where are the only native Protestants? What great political change was consummated in 1870?

Describe the situation of the capital. Distinguish, by name and situation, the palaces of the King and the Pope. What and where is the public promenade? Name the three most famous buildings on the right bank. What are the six great attractions offered by Rome to tourists? Name the most famous street, and the most conspicuous ruin.

How does the government show respect and consideration for the Pope? Name his two palaces in Rome, and his villa in the country. What change in the national universities rendered a Papal university necessary? What is the great impediment in the way of elementary instruction? In what three respects is the Italian of the north superior to the Italian of the south? What proof has the country recently given of returning prosperity? What is the present form of government?

Compare Sicily and Sardinia with the Italian mainland in respect of surface and civilisation. What products are characteristic of Sicily and Sardinia respectively?

DESCRIPTIVE TABLE.

Adige, *ad'e-je*, It. pron. *ā'de-jā*, a river which rises in the Tyrol, and falls into the Gulf of Venice N. from the mouths of the Po.

Adria, *ā'dre-ā* (the black town), a town in the province of Rovigo, between the rivers Po and Adige. Pop. 10,000. *See* REMARKS, page 174.

Adriatic Sea (named after the town of Adria), sometimes called the Gulf of Venice, a branch of the Mediterranean, separating Italy from Illyria, Dalmatia, and Albania. It is about 550 miles long, with an average breadth of 120 miles.

Alessan'dria (named after Pope Alexander III.), a strong city of Piedmont, capital of the province of the same name, on the Tanaro. Near it is the celebrated field of Marengo, where Napoleon Bonaparte defeated the Austrians in 1800. Pop. 30,761.—41° 56′ N. lat., 8° 37′ E. long.

Alghe'ro (the peninsula), a seaport on the W. coast of Sardinia, province of Sassari. Pop. 8769.—40, 33 N. 8, 17 E.

Altamu'ra, a well-built inland town of Puglia, province of Bari, at the foot of the Apennines. Pop. 17,108.

Amal'fi, a seaport of Campania, province of Salerno, on the Gulf of Salerno. Here the mariner's compass is said to have been invented by Gioia in 1302. Pop. 4994.

Anco'na (the place at the corner), a seaport and fortress in the province of the same name, on the Adriatic, with a good harbour. Pop. 28,557.—43, 37 N. 13, 35 E.

Aos'ta, a town in Piedmont, province of Turin, on the Dora Baltea, an affluent of the Po, with numerous remains of Roman architecture. Pop. 6151.

Ap'ennines. *See* REMARKS, page 174.

A'quila, a town of Abruzzi and Molise, the capital of the province of that name, on the Pescara, near Monte Corno Pop. 13,513.

Arezzo, *ā-ret'so*, the ancient *Arretium*, a city of Tuscany, capital of the province of the same name, near the Arno. Here Petrarch was born in 1304. Pop. 11,816.

Ar'no, a river of Tuscany, which rises in the Apennines, and falls into the Mediterranean below Pisa.

As'coli, capital of the province of the same name, on the Tronto, which is celebrated for the fertility of its valley. Pop. 11,199.

As'ti, an ancient city of Piedmont, province of Alessandria, on the Tanaro. Here the poet Alfieri was born in 1749. Pop. 17,340.

Avelli'no, a town of Campania, capital of the province of the same name, in a fine valley, watered by the Sabato. Pop. 16,376.

Aver'sa, a town in the province of Caserta, in a fertile plain. Pop. 20,183.

Ba'ri, the ancient *Barium*, a fortified seaport on the Adriatic, the capital of a province of the same name. Pop. 58,266.—41, 8 N. 16, 53 E.

Barlet'ta, a seaport of Puglia, province of Bari, on the Adriatic, with a fine cathedral and considerable trade. Pop. 31,994.—41, 19 N. 16, 18 E.

Bassa'no, a town in the province of Vicenza, on the Brenta, with a great trade in raw silk. Pop. 7769.

Bellu'no, a town of Venetia, on the

Piave, capital of the province of the same name, with a handsome cathedral. Pop. 5770.

Beneven'to (fine climate), the ancient *Beneventum*, capital of the province of Benevento, 32 miles N.E. of Naples. It contains the celebrated Arch of Trajan and other Roman remains. Pop. 17,406.

Ber'gamo (on a hill), a commercial city of Lombardy, the capital of a province of the same name, and the seat of a great annual fair. Pop. 23,819.—45, 42 N. 9, 40 E.

Biton'to, a town of Puglia, province of Bari, near the Adriatic, with a fine cathedral. It is noted for its wine. Pop. 22,726.

Blanc, Mont. *See* FRANCE, page 140.

Bol'ca, a mountain in the territory of Verona, rich in curious fossil remains. It is evidently an exhausted volcano.

Bologna, *bo-lon'ya*, the ancient *Bononia*, capital of the province of the same name, situated in a fertile plain at the base of the Apennines. It is the seat of a famous university, and has given birth to a great number of eminent men. Pop. 103,998.—44, 30 N. 11, 21 E.

Bolse'na, a lake in Central Italy, compartment of Rome, surrounded by finely wooded hills.

Bonifacio, *bon-e-fâtsh'o*, **Strait of**, between Corsica and Sardinia; the narrowest part is about 10 miles wide.

Bren'ta, a river of Venetia, which rises in the Tyrol, near Trent, and falls into the Gulf of Venice.

Brescia, *bresh'e-â*, a city of Lombardy, capital of the province of Brescia. It contains a fine modern cathedral, and many remains of ancient grandeur. Pop. 43,354.—45, 32 N. 10, 13 E.

Brin'disi, the ancient *Brundusium*, a seaport in the S.E. of Puglia, province of Lecce, on the Adriatic, important as the nearest port to Alexandria on the European system of railways. Pop. 13,194.

Cagliari, *kâl'yâ-re*, a city of Sardinia, capital of the province of Cagliari, on a bay of the same name, on the S. shore of the island. It has a university, a fine cathedral, and considerable commerce. Pop. 35,588.—39, 13 N. 9, 7 E.

Cala'bria, a mountainous and fertile district in the southern part of Italy. It has suffered severely from earthquakes. Pop. 1,257,907.

Caltagiro'ne, a town in Sicily, province of Catania, built on two hills joined together by a bridge. Pop. 28,119.

Campania, *kâm-pân'ya*, a compartment of Italy, comprising the provs. of Avellino, Benevento, Caserta, Naples, and Salerno. Pop. 2,896,579.

Campobas'so (the low plain), a town of Abruzzi and Molise, capital of the province of the same name. Pop. 13,345.

Ca'pri (goat island), a picturesque little island at the mouth of the Bay of Naples. It was anciently called *Capreæ*, and was the favourite retreat of the Emperors Augustus and Tiberius.

Cap'ua, a city of Campania, province of Caserta, on the left bank of the Volturno. Here Hannibal wintered after the battle of Cannæ. Pop. 12,174.

Carra'ra, a town of Tuscany, in the province of Massa-Carrara, famed for its marble. Pop. 11,869.

Casa'le, a town in Piedmont, province of Alessandria, on the Po. Pop. 17,096.

Caser'ta, a town of Campania, capital of the province of Caserta, with a magnificent royal palace and gardens. Pop. 17,257.

Castellama're, a city in the province of Naples, on the site of the ancient *Stabiæ*. Pop. 22,207.—40, 41 N. 14, 29 E.

Cata'nia, an ancient city and seaport of Sicily, capital of the province of the same name, at the foot of Mount Etna, by the lava of which it has been three times destroyed. Pop. 97,355.—37, 28 N. 15, 5 E.

Catanza'ro, a town of Calabria, capital of the province of Catanzaro, near the Gulf of Squillace. Pop. 20,931.

Ca'va, a town of Campania, province of Salerno. Pop. 6397..

Cefalu'* (on the headland), a seaport on the N. coast of Sicily, province of Palermo. Pop. 10,194.—38, 0 N. 14, 4 E.

Cela'no or **Fu'cino**, the ancient *Fucinus*, a lake in the N.W. of Naples, province of Aquila, now drained.

Cenis, Mont, *mong seh-ne'* or *sâ-*

The Italians sound *ch* as *k*, and *ce*, *ci*, *cci*, like *ch* in *child*.

neece', one of the Graian Alps, 11,457 ft. high, through which a railway tunnel has been formed for traffic between France and Italy.

Chieti, *ke-ā'te*, a town of Abruzzi and Molise, capital of the province of the same name, on a ridge of hills near the Pescaro. Pop. 12,273.

Chioggia, *ke-od'jā*, a strong seaport in the province of Venice, on an island in the Gulf of Venice, connected with the mainland by a bridge of 43 arches. Pop. 20,381.—45, 13 N. 12, 17 E.

Circel'lo, Cape, a headland of S. Italy on the Mediterranean; the ancient *Circæum*, the fabled residence of the enchantress Circe.—41, 13 N. 13, 3 E.

Civita Vecchia, *che've-tā vek'ke-ā* (old city), a strong seaport in the province of Rome, on the Mediterranean. Pop. 11,640.—42, 4 N. 11, 45 E.

Colon'ne, Cape, on the E. coast of the province of Catanzaro.—39, 7 N. 17, 15 E.

Co'mo (in the hollow), a beautiful lake in Lombardy, between Milan and Chiavenna.

Co'mo, a city at the S.W. extremity of the lake of the same name, surrounded by charming scenery; it is the capital of the province of Como. Pop. 25,560.

Corsica. *See* FRANCE, page 137.

Cosen'za, a city of Calabria, capital of the province of that name. Pop. 14,522.—39, 18 N. 16, 15 E.

Cremo'na, a city of Lombardy, capital of the province of Cremona, on the Po, with considerable trade and manufactures. It was formerly celebrated for its violins. Pop. 29,011.—45, 8 N. 10, 1 E.

Cuneo, *koo-nā'o*, a city of Piedmont, capital of the province of the same name, on the Stura, with cloth and silk manufactures. Pop. 12,413.

El'ba, an island near the coast of Tuscany, the residence of Napoleon I. on his abdication in 1814. It is noted for its mines of iron. (Por'to Fer'rajo, the capital of the island, has a pop. of 5779.) Pop. 23,997.—42, 49 N. 10, 20 E.

Es'te, a town of Venetia, province of Padua. Pop. 5743.

Et'na (*Ital.* **Gibello**), a celebrated volcanic mountain in the N.E. of Sicily. Its height is 10,874 feet above the sea, and its circuit at the base is nearly 90 miles.

Faen'za, a town of Emilia, province of Ravenna. Pop. 13,998.

Fa'no, a seaport in the province of Pesaro-Urbino, on the Adriatic. Pop. 6600.—43, 51 N. 13, 1 E.

Fer'mo, a town in the Marches, province of Ascoli, on the Adriatic. Pop. 15,862.—43, 10 N. 13, 43 E.

Ferra'ra, a city in Emilia, capital of the province of Ferrara, on a branch of the Po. Here the poet Tasso was imprisoned from 1579 till 1586. Pop. 28,814.—44, 50 N. 11, 41 E.

Fiumicino, *fe-oo-me-che'no*, a small seaport town of Central Italy, the port of Rome, with which it is connected by railway.

Flor'ence (*Ital.* **Firenze**), a well-known city of Tuscany, formerly capital of the kingdom. The collection of paintings and statues in the Medici or Florentine Gallery is one of the noblest in the world. Among the eminent men born at Florence may be named Dante in 1265, and Michael Angelo in 1558. Pop. 122,039.—43, 46 N. 11, 15 E.

Foggia, *fod'jā*, a city of Puglia, the capital of the province of the same name, with immense subterranean corn magazines, and a great annual fair for corn and wool. Pop. 36,852.

For'li, a well-built town in Emilia, capital of the province of Forli. Pop. 16,016.

Fossa'no, a town of Piedmont, province of Cuneo. Pop. 7272.

Frasca'ti, the ancient *Tusculum*, a town in Central Italy, province of Rome, beautifully situated on the declivity of a hill; it is the fashionable summer resort of the Romans. Here, in 1788, died Charles Edward Stuart, known as the young Pretender; also, in 1817, his brother, Cardinal York, who was bishop of the diocese. Pop. 7045.

Gaeta, *ga-ā'ta*, a strongly fortified seaport of Campania, on the Gulf of the same name, province of Caserta. Pop. 18,385.—41, 12 N. 13, 34 E.

Gallip'oli, a seaport of Puglia, province of Lecce, on a rocky peninsula on the E. coast of the Gulf of Taranto, with a great trade in oil. Pop. 7578.—40, 3 N. 17, 58 E.

Gar'da, a lake in Venetia, from which the river Mincio issues. The upper part of the lake is in Tyrol.

Gen'oa, a maritime province of Liguria, once the territory of a celebrated republic. The struggle between the Genoese and the Venetians is the

most memorable in the Italian annals of the Middle Ages. Pop. 760,809.

Gen'oa (*Ital.* **Gen'ova**), a strong city and seaport, capital of the above province, beautifully situated on the bay of the same name. Its manufactures and commerce, though much less than formerly, are still great, and are now increasing. Here Columbus, the discoverer of America, was born about 1440. Pop. 138,081.—44, 24 N. 8, 52 E.

Girgen'ti, the ancient *Agrigentum*, a city on the S.W. coast of Sicily, capital of a province of the same name. Pop. 19,380.

Go'zo, an island in the Mediterranean, 4 miles N.W. of Malta, belonging to Great Britain. Pop. reckoned with Malta.

Grosset'o, a town of Tuscany, capital of the province of the same name. Pop. 4151.

Ischia, *is'ke-â*, an island off the coast of Naples, with hot springs; it suffered severely from an earthquake in July 1883, when 2450 lives were lost. —40, 46 N. 13, 50 E.

Lecce, *letch'ā*, a handsome town of Puglia, capital of the province of Lecce, in a rich district, with considerable trade. Pop. 21,742.

Leg'horn (*Ital.* **Livor'no**), a city and seaport in Tuscany, capital of the province of the same name; it has an extensive trade, both general and transit. Pop. 77,781.—43, 32 N. 10, 17 E.

Leu'ca, Cape, the S.E. extremity of Italy.—39, 48 N. 18, 22 E.

Lip'ari Islands, a volcanic group on the N. of Sicily. The most remarkable are Lipari and Stromboli; the volcano in the latter is in a state of perpetual activity. Pop. 12,000.

Lo'di, a town of Lombardy, province of Milan, on the Adda. Here in 1796 Napoleon gained one of his earliest and greatest victories. Pop. 18,689.

Lore'to, a town in the province of Ancona, on the Adriatic. Its *Santa Casa*, or holy house, believed to have been the dwelling of the Virgin Mary, has long been annually visited by thousands of pilgrims. Pop. 8100.

Lucca, *look'kâ*, a maritime province of Tuscany, formerly an independent duchy. It has been long distinguished for its silk manufactures, and its oil is esteemed the best in Italy. Pop. 284,287.

Luc'ca, the capital of the above province, situated in a rich and fertile plain, watered by the Serchio, and surrounded by mountains. Pop. 21,286.—43, 51 N. 10, 31 E.

Luga'no (the lake or hollow), a beautiful lake in the N. of Italy, between Lakes Maggiore and Como. The upper part of the lake is in the Swiss canton of Ticino.

Macerata, *mâ-tchâ-râ'tâ*, a town in the Marches, capital of the province of the same name. It is the seat of a university. Pop. 10,063.

Magen'ta, a town in the province of Milan, on the Tessino, on the road from Novara to Milan, where the Austrians were signally defeated by the French in June 1859. Pop. 5011.

Maggiore, *mad-jo'rā*, or **Lake of Locarno**, situated at the foot of the Alps, and traversed by the Ticino. Its Borromean Islands are remarkable for their picturesque scenery. The upper part of the lake is in the Swiss canton of Ticino.

Mal'ta, the ancient *Melita*, an island in the Mediterranean, 58 miles S. from Sicily, belonging to Great Britain. Its area is 98 square miles. Though naturally sterile, it has been made comparatively fertile by diligent cultivation. It was long the chief seat of the Knights of St John of Jerusalem. Pop. 149,782. *See* BRITISH EMPIRE, page 32.

Manfredo'nia, a gulf of the Adriatic, on the E. coast of the province of Foggia.

Manfredo'nia, a well-built town and seaport on the gulf. Pop. 7574.—41, 38 N. 15, 56 E.

Man'tua, a city of Lombardy, the capital of a province of the same name, formerly a republic. It is situated on an island formed by the Mincio, and is one of the strongest fortresses in Europe. Virgil was born here in the year 70 B.C. Pop. 28,048.—45, 9 N. 10, 48 E.

Marsa'la, the ancient *Lilybæum*, a seaport in the province of Trapani, Sicily, at the W. extremity of the island, noted for its wines. Pop. 19,732. —37, 49 N. 12, 21 E.

Mas'sa, the capital of the province of Massa and Carrara. Pop. 4786.

Mate'ra, a town in the province of Potenza, on the Gravina. Pop. 14,312.

Messi'na, a strong seaport in the N.E. of Sicily, capital of the province of Messina, situated on the straits of the same name, with a fine harbour. Pop. 76,982.—38, 11 N. 15, 34 E.

Mil'an (*Ital.* **Mila'no**), a noble city of Lombardy, capital of the province

of Milan, situated in a beautiful plain between the Adda and the Ticino. It has a noble cathedral of white marble. In the Middle Ages Milan was the capital of a republic, and afterwards of a duchy. It is now the centre and chief emporium of the silk trade of Lombardy. Pop. 295,000.—45, 28 N. 9, 11 E.

Mod'ena (the fortified place), the ancient *Mutina*, a handsome city, capital of the province of the same name, situated in a fertile plain, between the rivers Panaro and Secchia. Pop. 31,053.—44, 38 N. 10, 55 E.

Mod'ica, a town in the S. of Sicily, province of Syracuse, with some curious caves in its vicinity. Pop. 37,919.

Mondo'vi, a strong town in Piedmont, province of Cuneo, on the Ellero, with considerable manufactures. Pop. 11,958.

Monop'oli, a fortified town of Puglia, province of Bari, on the Adriatic, with considerable trade in oil and wine. Pop. 19,993.

Mon'za, a town of Lombardy, near Milan. The celebrated iron crown of Lombardy was kept in its cathedral. Pop. 17,077.

Na'ples (*Ital.* **Nap'oli**, new city), the largest city in Italy, capital of the province of the same name. Its situation is delightful; rising like an amphitheatre, it forms, with its verdant shores and magnificent bay, a scene of almost unrivalled beauty. Previous to 1860, Naples was the capital of the Kingdom of the Two Sicilies. Pop. 463,172.—40, 51 N. 14, 15 E.

Nova'ra, a strongly fortified town of Piedmont, capital of the province of Novara. Here, in March 1849, the Austrians, under Radetzky, signally defeated the Sardinians under King Charles Albert, who immediately resigned the crown in favour of his son Victor Emmanuel II. Pop. 15,232.

Orvie'to (old city), a town in the province of Perugia, on a hill overlooking the Paglia. It has a fine cathedral. Pop. 7423.

Otran'to (a place almost surrounded by water), a seaport of Puglia, in the province of Lecce, on the straits of Otranto, with a celebrated castle. Pop. 2092.

Pad'ua (*Ital.* **Padova**), a city of Venetia, the principal town in the province of the same name; it is the seat of an ancient university. Here the historian Livy was born in the year 59 B.C. Pop. 47,334.—45, 24 N. 11, 52 E.

Paler'mo (the spacious harbour), the ancient *Panormus*, a noble seaport of Sicily, the capital of the province of the same name, beautifully situated on the N. coast. It has several fine squares adorned with fountains and statues; the terrace of the Marino is a splendid promenade fully a mile in length. Pop. 205,712.—38, 8 N. 13, 22 E.

Par'ma, the chief town in the province of Parma, beautifully situated on a small river of the same name. Pop. 44,492.—44, 48 N. 10, 20 E.

Partenico, *par-ten'e-ko*, or **Partinico**, *par-te'ne-ko*, a city in Sicily, 14 miles W.S.W. of Palermo. Pop. 21,000.

Pavi'a, on the Ticino, capital of the province of the same name; it is the seat of a university. Here Francis I. of France was defeated and taken prisoner by the generals of the Emperor Charles V. in 1525. Pop. 29,836. —45, 11 N. 9, 9 E.

Perugia, *pā-roo'jā* (the town in the marsh), a walled town, capital of the province of the same name, on the Tiber; it is the seat of a university. Pop. 17,395.—43, 6 N. 12, 23 E.

Perugia, Lake of, in the district of the same name, the *Lacus Thrasimenus* of the Romans.

Pes'aro, a well-built town in the Marches, capital of the province of Pesaro and Urbino, on the Adriatic, at the mouth of the Foglia. Pop. 10,996.

Piacenza, *pe-ā-chen'zā* (the pleasant place), the ancient *Placentia*, the principal town in the province of Piacenza, near the confluence of the Trebbia and the Po. Pop. 34,925.

Pia've, a river of Venetia, falling into the Gulf of Venice.

Pinero'lo, a manufacturing town in Piedmont, province of Turin, near the foot of the Alps; it is the chief town in the Waldensian valley. Pop. 11,332.

Pisa, *pee'zā*, a city of Tuscany, formerly the capital of a republic, situated on the Arno, and noted for its salubrity. It is the chief town in the province of Pisa, and the seat of a celebrated university; its cathedral, baptistry, and leaning tower have long been famous. The astronomer Galileo was born here in 1564. Pop. 26,857.—43, 43 N. 10, 24 E.

Pistoja, *pis-to'yā*, a handsome city of Tuscany, province of Florence, on a tributary of the Arno. Pop. 12,224.

Po, the largest river of Italy; after a course of about 450 miles, including

its windings, it enters the Adriatic by several mouths. *See* REMARKS, p. 174.

Policas'tro, Gulf of, on the W. coast of Naples.

Pon'tine Marshes, a large marshy tract in the southern extremity of the province of Rome, extending 24 miles along the coast. It is traversed by the road from Rome to Naples.

Por'tici, a town in the province of Naples, at the foot of Vesuvius, on the site of the ancient *Herculaneum.* Pop. with Resina, 9777.

Porto Maurizio, *por'to mow-rit'ze-o,* a seaport town, capital of the province of the same name, on the Gulf of Genoa. Pop. 6207.

Poten'za (the powerful), a fortified town of Basilicata, capital of the province of Potenza. Pop. 16,968.

Pra'to (meadow), a walled town of Tuscany, province of Florence, with a fine old cathedral. Pop. 13,410.

Pro'cida, a small island between Ischia and the coast of Naples. Pop. 13,582.

Raven'na, the chief town in the province of the same name, near the Adriatic. It was the capital of the Western Empire in the 5th century. Here the poet Dante died in 1321. Pop. 12,100.—44, 25 N. 12, 12 E.

Reggio, *red'jo,* a walled town in Emilia, capital of the province of Reggio of Emilia. Here the poet Ariosto was born in 1474; the painter Correggio in 1494; and the naturalist Spallanzani in 1729. Pop. 18,634

Reggio, an ancient town and seaport of Calabria, capital of the province of Reggio of Calabria, on the Strait of Messina, in a very fertile district. Pop. 23,812.—38, 6 N. 15, 40 E.

Rie'ti, a town in the province of Perugia, on an elevated plain near the Velino. Pop. 11,478.

Ri'mini, the ancient *Arim'inum,* a seaport in the province of Forli, on the Adriatic. Pop. 10,838.—44, 4 N. 12, 34 E.

Rome, the capital of Italy. Pop. 273,010. *See* REMARKS, page 176.

Ro'sa, Mon'te, a mountain on the confines of Switzerland and Italy. Height, 15,208 feet above the sea.

Rovi'go, a town of Venetia, capital of the province of the same name, near the Adige. Pop. 7452.

Saler'no, a city of Campania, capital of the province of Salerno, on a gulf of the same name, the seat of a university. Pop. 22,226.

Saluzzo, *sä-loot'so,* a town of Piedmont, province of Cuneo, at the foot of the Alps, on an affluent of the Po. Pop. 9796.

San Mari'no, one of the smallest and most ancient states in Europe. It is a republic, dating from the fifteenth century, and is enclosed on all sides by the territories of the kingdom of Italy. It is situated in lat. 43° 58′ N., long. 12° 21′ 24″ E., and has an area of about 24 square miles, with a population of 7816, mainly occupied in agriculture and silk industry. The government of the republic is vested in a senate of 60 members, elected for life from all ranks of the people. The chief town is also called *San Marino,* and has a population of about 1000.

Sardin'ia, a large island in the Mediterranean, S. of Corsica. It has a very diversified surface; and although its soil is in general fertile, and a good deal has been done for the improvement of the island of late years, cultivation is still in a backward state. Area, 9547 square miles. Pop. 682,002.

Sassa'ri, a city in the N.W. of Sardinia, capital of the province of the same name, with a seaport called Porto Torres. Pop. 31,596.

Savo'na, a seaport in the province of Genoa, on the Gulf of Genoa. Pop. 19,120.—44, 18 N. 8, 27 E.

Sic'ily, the largest island in the Mediterranean, separated from Italy by the Straits of Messina. Its extreme length is 180 miles, and its greatest breadth 120; area 10,500 square miles. It is mountainous, but the soil is rich, and the climate delightful. Its vegetable productions embrace many tropical as well as European plants, and it was anciently regarded as the granary of Italy. The principal articles of export are the wines of Marsala, sulphur, fruits, and olive-oil. Pop. 2,928,841.

Sien'a, a beautiful city in Tuscany, capital of the province of the same name; it is the seat of a university. Here the Italian language is spoken in great purity. Pop. 22,450.

Solferi'no, a village in Lombardy, province of Mantua, to the south of the lake of Garda. Here the French under Napoleon III. defeated the Austrians under Francis-Joseph I. in June 1859. Pop. 574.

Son'drio, a town of Lombardy, capital of the province of the same name.

Sorren'to, a town on the Bay of Naples. Here the poet Tasso was born in 1544. Pop. 5502.

Spartiven'to, Cape, the most southerly point of Italy.—37, 56 N. 16, 3 E.

Spezia, *spet'ze-a,* a seaport in the province of Genoa, the chief naval arsenal of Italy. Pop. 19,864.

Spole'to, a town in Umbria, province of Perugia, with a stupendous aqueduct carried over a deep ravine by 10 arches. Pop. 7696.

Squillace, *skweel-lä'tchā,* a gulf in the S. of Naples.

Syr'acuse, a city of Sicily, with extensive remains of the celebrated ancient capital of that name. Pop. 19,285.—37, 3 N. 15, 17 E.

Tagliamento, *täl-yä-men'to,* a river of Venetia, which rises in the Tyrol, and falls into the Adriatic.

Tana'ro, a river of Piedmont, which passes Alessandria, and joins the Po.

Ta'ranto, Gulf of, a spacious bay, formed by the S.W. and S.E. extremities of Italy.

Ta'ranto, the ancient *Tarentum,* a seaport on a small island in the gulf of the same name. Pop. 22,741.

Tera'mo (between the rivers), a town in Abruzzi and Molise, capital of the province of the same name. Pop. 9635.

Ter'ni, the *Interamna* of the ancients, a town in the province of Perugia, on the Nera. Here the historian Tacitus was born in the year 54 B.C. There are celebrated waterfalls a mile below the town, at the influx of the Veline into the Nera. Pop. 12,419.

Terraci'na, a seaport in the province of Rome, on the Mediterranean. Pop. 7376.

Tiber (*Ital.* **Teve're**), the classical river on which Rome stands, rises in the Apennines, flows south and southwest, and falls into the Mediterranean.

Tici'no, a river which rises in Mount St Gothard, flows through Lake Maggiore, and falls into the Po below Pavia.

Tiv'oli, the ancient *Tibur,* a town to the east of Rome, delightfully situated on the Teverone. Pop. 8105.

Tor're del Gre'co, a town at the foot of Mount Vesuvius, which has been repeatedly destroyed by lava and earthquakes. Pop. 21,588.

Tra'ni, a seaport of Puglia, province of Bari, on the Adriatic. Pop. 21,173. —41, 17 N. 16, 26 E.

Trapa'ni, the ancient *Drepănum,* a seaport on the W. coast of Sicily, capital of the province of the same name. Pop. 31,742.

Trevi'so, a town of Venetia, capital of the province of the same name, on the Sile, with considerable trade. Pop. 18,301.

Tu'rin (*Ital.* **Torino**), a city in Piedmont, formerly the capital of the kingdom, situated on the Po. Its streets and squares are spacious and elegant, and it is the seat of a distinguished university. Pop. 226,307.—45, 4 N. 7, 42 E.

Udine, *oo'de-nā,* a city of Venetia, capital of the province of the same name. Pop. 23,254.

Urbino, *oor-be'no,* a town in the province of Pesaro and Urbino. Here the painter Raphael was born in 1483. Pop. 5162.

Valet'ta, the capital of Malta. Pop. 60,000.—35, 54 N. 14, 30 E. *See* BRITISH EMPIRE, page 32.

Valtelline', a district of Lombardy, consisting of a long valley traversed by the Adda.

Velle'tri, a walled town in the province of Rome, near the Pontine Marshes. Pop. 14,800.

Ven'ice (*Ital.* **Vene'zia**), the capital of the province of the same name, situated on the Gulf of Venice, is built on a number of isles separated by canals, and is now connected with the mainland by a railway. This magnificent city presents at a distance the singular appearance of domes and spires, churches and palaces, floating on the waves. Pop. 129,276.—45, 26 N. 12, 20 E.

Veno'sa, the ancient *Venusia,* a town of Basilicata, province of Potenza. Horace was born here about 67 B.C. Pop. 7222.

Vercel'li, a town of Piedmont, province of Novara, on the Sesia, with a fine cathedral. Pop. 20,165.

Vero'na, a city in Venetia, capital of the province of the same name, beautifully situated on the Adige. Here is a fine amphitheatre, the most perfect specimen of Roman architecture which now exists. P. 60,768.—45, 26 N. 11, 1 E.

Vesu'vius, a volcanic mountain, about 8 miles S.E. from the city of Naples. In its first great eruption on record (A.D. 79), which was accompanied by an earthquake, the cities of Herculaneum and Pompeii were buried beneath lava and ashes. Excavations made during the last and present centuries, by uncovering these ancient cities, have furnished the world with

many curious and interesting relics of classic times. The eruptions of August 1831 and April 1872 were the most destructive of modern date; that of 1867-68 was of more than usual magnitude. The mountain is 4165 feet high, and in 1880 a railway was constructed to carry passengers to the top.

Viareggio, *ve-ă-red'jo*, a seaport of Tuscany, in the province of Lucca, with a flourishing trade. Pop. 9983.

Vicen'za, a city of Venetia, capital of the province of the same name. It contains many fine specimens of the architectural skill of Palladio. Pop. 24,331.—45, 32 N. 11, 33 E.

Villafran'ca, a town in Venetia, province of Verona, where in 1859 a treaty of peace was concluded between the French and the Austrians. P. 4766.

Vi'so, Monte, one of the Cottian Alps in Piedmont, 12,598 feet high.

Viter'bo, a city in the province of Rome. Pop. 16,326.

Volter'ra, the ancient *Volaterræ*, a town of Tuscany, province of Pisa, with vast remains of Etruscan architecture. Pop. 5796.

Volturno, *vol-toor'no*, a river of Naples, which rises in the Apennines, and falls into the Gulf of Gaeta. On its banks, in October 1860, the Italians, under Garibaldi, defeated the army of the King of Naples.

TURKEY IN EUROPE

Is bounded N. by Austria, Servia, and the Danube; W. by Dalmatia and the Adriatic; S. by Greece, the Archipelago, the Dardanelles, the Sea of Marmora, and the Straits of Constantinople; E. by the Black Sea. Including Dependencies as well as Immediate Possessions, it contains about 130,000 square miles, and a population of 8,630,000.

Immediate Possessions :—

Constantinople, consisting of the city and suburbs of Constantinople, capital of the Ottoman Empire.

Adrianople, southern half of ancient Thrace; chief towns, Adrianople, Gallipoli.

Eastern Roumelia, northern half of ancient Thrace; chief town, Philippopolis.

Salonika, or Western Roumelia, the ancient Macedonia; chief towns, Salonika, Monastir or Bitolia.

* Prisrend and Scutari, with chief towns of the same name.

* Janina, with chief town of the same name, the ancient Epirus.

Dependencies :—

Bulgaria, tributary principality; capital, Sophia.

Bosnia, Herzegovina, and Novi-Bazar, in the occupation of Austria; capital, Bosna-Serai or Serajevo.

Islands.—Lemnos, Imbros, Samothraki, Thasos, Crete.

Gulfs.—Salonica, Cassandra, Monte Santo, Contessa or Orphano, Saros.

Seas and Straits.—The Black Sea, the Archipelago, the

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* These two divisions constitute Albania. All these divisions are called by the Turks *vilayets*, *i.e.*, governments, because at the head of each is a lieutenant-governor. Vilayets are subdivided into *sandjaks*, and these again into *kazas*, the smallest administrative subdivision.

Sea of Marmora; the Dardanelles or Hellespont; the Bosporus, or Straits of Constantinople.

Capes.—Cassandra, Deprano, Monte Santo.

Mountains.—The Balkan, Despoto-Dagh, Pindus, Olympus, Athos.

Lakes.—Ochrida, Janina, and part of Scutari.

Rivers.—Drin, Maritza, Struma, Vardar, Kara-Su.

REMARKS.

The present reduced dimensions of European Turkey date from the Berlin Treaty of 1878. By that instrument, Roumania, Servia, and Montenegro were declared independent of the Sultan, as the sovereign of Turkey is called. Bulgaria was made a tributary principality, all its fortresses being destroyed, and the right of erecting new ones withheld, the prince to be chosen by a constituent assembly, with approval of the Sultan and assent of the Great Powers, from one of the minor dynastic houses of Europe; and Eastern Roumelia, while remaining under the direct political and military authority of the Sultan, was placed, for legislative and administrative purposes, under a Christian governor, to be appointed, for a term of five years, by the Sultan, with assent of the Great Powers, and to be assisted by a single chamber.

The best defined chain is the Balkan, often called by its ancient name *Hæmus*, which, running east and west, separates Bulgaria from Roumelia. From the Balkan runs southward, through the centre of the Grecian peninsula, a range identified with the ancient Pindus, and dividing the waters which flow into the Archipelago from those which flow into the Adriatic. Tchar-Dagh, the mountain-knot at which this range leaves the Balkan, is the head of drainage to this quarter of Europe; for from it the waters flow to the Archipelago by the Vardar, to the Adriatic by the Drin, and to the Danube by the Morava. None of the rivers are of much use for navigation. East of Pindus, another range, Despoto-Dagh, runs southward from the Balkan to the Archipelago, forming the watershed between the rivers Maritza and Kara-Su; and, west of Pindus, continuations of the Dinaric Alps, crossing the Dalmatian frontier, overspread Albania, in which are considerable lakes draining into the Adriatic. Only one-half of Lake Scutari belongs to Turkey, the other half being Montenegrin. On the whole, European Turkey is a mountainous country, with grand scenery and valleys of equal beauty and fertility. In respect of height, the mountains rank with the Apennines; witness

	Feet.
Tchar-Dagh, meeting-point of Pindus with the Balkan,	9700.
Olympus, in the S.E. corner of Salonica, . .	9754.
Rilo, meeting-point of Despoto-Dagh with the Balkan,	9842.

A characteristic product of the mountains is *valonia*, *i.e.*, acorn-cups, invaluable in the process of tanning. Wide valleys, level enough to be called plains, occur on both sides of the Balkan, where that chain separates Bulgaria from Roumelia. Those of Bulgaria afford excellent pasturage; those of Roumelia are more favourable to fruit. So abundant everywhere is fruit, that the native spirit called *raki* is distilled from plums. Tobacco is a very wide-spread crop, and one of the most profitable. In the basin of the Maritza, roses are grown for the extraction of otto. All sorts of grain are grown, from barley and the like on the higher grounds to maize and rice lower down. The climate is similar to that of Italy and Spain, except that, latitude for latitude, the extremes of temperature at opposite seasons of the year are greater in Turkey than in these countries; which is due to Turkey's being less of a peninsula, and to its lying nearer the great continental mass formed by Russia and Asia. The exports consist of miscellaneous agricultural produce, and the imports of manufactured articles. There is a good deal of home-spinning and home-weaving throughout the country; but the few factories that exist are confined to the largest towns. The manufacture of leather is perhaps the most widely-spread.

The ruling race, the Osmanli Turks, all Mohammedans, form half of the population only in the capital and the adjacent districts. They are employed in one or other of the three classes into which Turkish officials are divided, as men of the law, *i.e.*, of the Koran, discharging ecclesiastical or judicial functions; men of the pen, engaged in the administration generally; and men of the sword, belonging to the army or navy. They also ply handicrafts and keep shop in towns; but they are found as tillers of the ground only in a few districts west and north of Constantinople. Most of the trade and commerce of the country is carried on by Greeks, who abound from Janina across the peninsula to Salonika, and thence along the whole seaboard. They are especially numerous in the seaports, as they furnish the bulk of the seafaring population. Armenian traders are influential; but they are found only in the larger towns. The Bulgarians are said to be of Finnish extraction, but they speak a Sclavonic dialect, intermediate between Servian and Russian; and they have the Sclavonic predilection for pasturage and agriculture. They are distinguished above the other races for honesty, temperance, and industry; and their country is comparatively well cultivated. They prevail not only in Bulgaria, but also in Eastern Roumelia, which some would therefore designate Southern Bulgaria. Servians, an undoubted Sclavonic race, prevail in the districts occupied by Austria. Finally, Arnauts, as they are called by the Turks, Skypetars, *i.e.*, Mountaineers, as they are called by themselves, descendants of the primitive inhabitants, prevail in Albania. Each of these races has a language of its own; and the traditional religion of them all, excepting the Osmanli Turks, is Christianity according to the eastern rite. A few have

become Roman Catholics; and under the Turkish yoke, so many apostatized, that the Osmanli Turks are not thought to constitute now a majority even of the Mohammedans in European Turkey.

The Christian races are incapable of uniting through mutual jealousy, amounting to antipathy. And that is the reason why their emancipation from the Turkish yoke was so late in beginning, and still remains incomplete; also why the emancipated populations are formed into a number of minor states, rather than into a single great one. Aware that what stirred the subject Christians to assert themselves was not added oppression on the part of the Sultan's government, but sympathy with the progress of liberty and of material prosperity throughout Europe, the Great Powers have urged the Sublime Porte, as the Sultan's government is called, to adopt European methods. The advice, highly questionable to an earnest Mohammedan, because whatever is not in the Koran is scarcely lawful for him, has been more effectual in the army and navy departments than in any other. Constitutions have been granted, the last one in 1876, according to which Turkey possesses a parliament of two chambers; but this parliament is rarely in session, and its resolutions are not respected. Schools of all grades, including technical and normal schools, up to a university on the German model, called "Seat of the Sciences," which was opened at Constantinople in 1870, have been thoroughly organized—on paper. Three railways have been made, one from Constantinople to Adrianople, one from Salonika to Uskup, a town far up the Vardar, and one in Bulgaria, between Varna on the coast and Rustchuk on the Danube; but these railways are unconnected. Bankruptcy also threatens; the foreign creditor receives no interest, and there is a forced circulation of paper money. In this state of affairs, the government officials are neither sufficiently nor regularly paid; and the consequence is corruption and extortion on their part, which creates discontent among the people, no matter what their race or their religion.

The island of Crete is a province of itself. Mountains traverse its length, culminating towards the eastern end in the ancient Ida, now Psiloriti, 7670 feet high. In the centre of the range live the Sphakiotes, famed as having never submitted to the Turks. The southern coast is rocky, the northern highly fertile. The population is chiefly of the Greek race, yet about one-third of them are Mohammedans. The other European islands, along with some belonging to Asia Minor, form a province which is administered from Gallipoli, the great naval station on the Dardanelles.

The only very large town in Turkey is the capital, CONSTANTINOPLE, the site of which, as it is naturally one of the most beautiful, so it is, commercially and strategically, one of the most commanding in the world. It occupies a triangular peninsula connected with the mainland only on the west; and the inlet called Golden Horn, on its northern shore, forms a harbour with miles of quay accommodation for the largest ships. Domes and

minarets, with cypresses in between, rise from out the city, which is spread over a series of gentle hills. The most notable building is the mosque of St Sophia, with twenty domes, once a cathedral church. The old triumphal arch, called *Sublime Porte*, by which name the Sultan's government is still designated, because under that arch he used to dispense justice, was destroyed by fire along with the old Seraglio or palace, to which it belonged. Constantinople does not improve on inspection; most of its streets are but filthy lanes. On the opposite side of the Golden Horn lies Pera, the European quarter; and on the opposite side of the Bosporus, Scutari, a residential suburb, which, though situated in Asia, is under the same administration with Constantinople.

EXERCISES.

What are the boundaries of Turkey in Europe? What is its extent in square miles? What is its population? Name the provinces. Name the dependencies. Which provinces correspond respectively to the northern and southern halves of ancient Thrace? Which provinces correspond respectively to ancient Macedonia and Epirus? Which two of them constitute Albania? Where are Philippopolis, Constantinople, Gallipoli, Salonika, Prisrend, Janina, Monastir, Sophia, and Serajevo?

Where are the Dardanelles, the Balkan, the Straits of Constantinople, Olympus, Gulf of Monte Santo, the Vardar, Lemnos, the Gulf of Cassandra, the Maritza, the Struma, the Kara-Su, and the lakes Janina, Ochrida?

What three countries once belonging to Turkey were declared independent by the Berlin Treaty of 1878? On what terms was Bulgaria made a tributary principality? How far is Eastern Roumelia under the Sultan, how far not?

What portion of European Turkey is separated from the rest of it by the Balkan? Between what rivers is Pindus the watershed? Where is the chief head of drainage? What rivers flow from it, in what directions? Between what rivers is Despoto-Dagh the watershed? Which are the highest three summits, and where? Do they rank with the summits of the Apennines or with those of the Alps? Where is the single lake-region? What lake is divided between Turkey and Montenegro? Where are there extensive plains? Where is the best fruit-region? What is obtained from plums, and what from roses? Compare the climate of Turkey with that of Italy, and account for what difference exists. Of what nature are the exports and imports respectively? What manufacture, not domestic, is perhaps the most widely spread?

What is the proper designation of the ruling race? Into what three sets are Turkish officials classified? Where only is the ruling race found tilling the soil? What stretch of country is peopled chiefly by Greeks? Where are Armenians found? How are the Bulgarians distinguished above the other races? Where do they abound, outside the principality of Bulgaria? Where do Servians abound? Which of these races is undoubtedly Slavonic? Which one furnishes the seafaring population? Who are the Arnauts or Skypetars? Are there Mohammedans in Turkey besides the Osmanli Turks? To what great division of the Church do almost all the Christians in Turkey belong?

What two facts are accounted for by the mutual antipathy of the Christian races? Why is it difficult for earnest Mohammedans to adopt European methods? In what department have Turks imitated European governments most successfully? What has become of the constitution of 1876? In what condition are the schools? What towns are the termini of the three railways in European Turkey? Mention facts showing that the government is in danger of bankruptcy. Show how this state of matters increases the general discontent.

Contrast the northern and southern coasts of Crete. What is the ancient Ida now called? What about the Sphakiotes? To what race does the population for the most part belong? What proportion of it is Mohammedan? From what town on the mainland are the other islands of European Turkey governed?

Describe the site of Constantinople. Give a bird's-eye view of it. What is discovered on closer inspection? Give an account of the most notable building. What and where is the Golden Horn? What suburb lies beyond it? What town in Asia forms really part of Constantinople? How has the Sultan's government come to be called the *Sublime Porte*?

OTTOMAN EMPIRE.

The strength of the empire lies in Asia. In Africa, distance has co-operated with other circumstances in diminishing the Sultan's authority over Egypt and Tunis. The particulars are these:—

	Area in sq. m.	Population
EUROPE—		
Immediate Possessions, including Eastern Roumelia, . .	82,000	5,275,000
Bulgaria, tributary principality, .	24,000	1,923,000
Bosnia, Herzegovina, and Novi-Bazar, in the occupation of Austria, ...	24,000	1,432,000
ASIA—		
Immediate Possessions, . .	729,000	17,500,000
Samos, tributary principality, .	212	37,000
AFRICA—		
Viceroyalty of Egypt, . .	1,051,000	17,386,000
Vilayet of Tripoli, . . .	344,000	1,000,000
Regency of Tunis, . . .	46,000	2,000,000

DESCRIPTIVE TABLE.

Adriano'ple (the city of Hadrian, by whom it was founded), a city in Roumelia, the capital of the vilayet of the same name, situated in a beautiful plain on the Maritza. It was the principal residence of the sultans previous to the taking of Constantinople by Mohammed II. in 1453, and it still ranks next to the capital in importance. Pop. 150,000.—41° 42′ N. lat. 26° 35′ E. long.

Alba'nia, a district comprising the two *vilayets* on the Adriatic. The native Albanians are a hardy race. Most of them are Christians; those in the south adhering to the eastern rite, while those in the north, called Mirdites, have joined the Roman Catholic Church. In the interior, many became Mohammedan on the subjugation of their country by the Turks. Pop. 1,200,000.

Archipelago, *ar-ke-pel'a-go* (the chief sea), called by the ancients the *Ægean Sea,* is that part of the Mediterranean Sea which lies between Turkey and Greece on the W. and Asia Minor on the E. It is studded with islands, and hence *Archipelago* has come to denote a sea interspersed with numerous islands.

Ar'ta, Gulf of, the *Ambracian Gulf* of the ancients, separates Turkey from Greece, and extends about 25 miles inland. The river Arta enters it on the N. The naval battle of Actium was fought near the entrance of this gulf, B.C. 29.

Ath'os, Mount, a mountain in Macedonia, 6778 feet high, occupying a peninsula formed by the Gulfs of Contessa and Monte Santo. It has received the name of *Monte Santo,* or the Holy Mount, from its numerous monasteries, which are supposed to contain about 3000 monks.

Balkan' or Hæmus Mountains. *See* REMARKS, page 186.

Banialu'ka, a strong town in Turkish Croatia, on the Verbas. Pop. 15,000.

Berat', a town in Albania, on the Beratino. Pop. 10,000.

Bihacz, *be-hâtch',* a strong town in Turkish Croatia, on the Unna. Pop. 4000.

Bosna-Serai, *bos-nâ-ser-i',* the capital of Bosnia, situated on a small stream. It has considerable manufactures of lances, daggers, and other arms. Pop. 25,000.—43, 53 N. 18, 25 E.

Bos'nia, a mountainous province in the N.W., traversed by the Dinaric Alps; along with Herzegovina and Turkish Croatia, it forms a vilayet, and is subdivided into five sandjaks. Area 22,000 square miles. Pop. 1,153,000.

Can'dia, the capital of the island of Crete, situated on the N. coast, in an elevated plain. It sustained a siege of 20 years against the Turks, from 1648 to 1669. Pop. 13,000.—35, 21 N. 25, 8 E.

Cane'a, the ancient *Cydonia,* a strong seaport in the N.W. of the island of Crete. Pop. 12,000.—35, 28 N. 24, 0 E.

Cassan'dra, Gulf of, in the N.W. of the Archipelago.

Constantino'ple (the city of Constantine), the capital of the Turkish Empire. Pop. of the city proper, 600,000; including the suburbs of Pera, Galata, Scutari, etc., 1,481,000.—41, 0 N. 28, 59 E. *See* REMARKS, page 188.

Constantino'ple, Strait of, anciently called the *Thracian Bosporus,* the narrow channel which connects the Sea of Marmora with the Black Sea.

Contes'sa, Gulf of, in the N.W. of the Archipelago, between the peninsula of Mount Athos and the coast of Macedonia.

Crete, also called **Can'dia,** after its chief town, a large island in the S. of the Archipelago, 160 miles long and from 10 to 30 miles broad. Its soil is fertile, and produces oil, wine, saffron, and a variety of fine fruits. Pop. estimated at 210,000.

Croa'tia, one of the three districts which form the vilayet of Bosnia.

Dardanelles, the ancient *Hellespont,* the strait connecting the Sea of Marmora with the Archipelago. Its length is upwards of 50 miles; its width is generally about two miles, but in some places towards the S. extremity it narrows to one mile. Two ancient castles, one on the European side and the other on the Asiatic side, are properly called the Dardanelles, and from them the strait takes its name.

Despo'to-Dagh, a branch of the Balkan Mountains, extending S.E. through Roumelia, and terminating on the bank of the Maritza. Height 7800 feet.

Drin, *dreen,* a river in the N. of Albania, which, after a course of 110 miles, falls into the Adriatic.

Drina, *dree'nâ,* a river which rises in Bosnia, flows between Bosnia and Servia, and joins the Save after a course of 180 miles.

Durazzo, *doo-rât'so,* or **Duras,** *doo-râs',* a seaport in Albania, anciently called *Dyrrachium,* the usual landing-place from *Brundusium* in Italy. Pop. estimated at 5000.

Gallip'oli (beautiful city), a commercial city and seaport in Thrace, on the Dardanelles. It is the chief naval station of Turkey. Pop. 20,000.—40, 25 N. 26, 39 E.

Gradis'ca, or Berbir, *ber'beer,* a strong town in Turkish Croatia, on the Save. Pop. 1850.

Herzegovina, *hert-sâ-go-ve'nâ,* a mountainous district in the vilayet of Bosnia. Soil fertile, but in some parts marshy. Pop. 208,000.—Chief town, *Mostar.*

Im'bros, an island off the E. entrance of the Dardanelles, 19 miles long and 10 miles broad. Pop. 4000.

Janina, or Yanina, *yä'ne-nä*, a town of Albania, situated on the side of a lake, in a plain covered with groves and gardens. Here Ali Pasha was assassinated in 1822. It is 44 miles N. of Arta. Pop. estimated at 30,000. —39, 48 N. 20, 53 E.

Lem'nos, or Stalim'enê, an island in the Archipelago, between Monte Santo and the Dardanelles. Pop. 10,000.—39, 50 N. 25, 11 E.

Macedo'nia, the historical name of a district nearly corresponding to the vilayet now called Salonika or Western Roumelia. The soil is generally fertile.

Marit'za, the ancient *Hebrus*, a river of Thrace, which issues from Mount Hæmus, and falls into the Archipelago W. of the Gulf of Saros.

Metzo'ro, a town 23 miles E.N.E. of Janina, in a mountain chasm, on both sides of the Arta.

Monastir', or Bito'lia, a town in the W. of Macedonia. Pop. estimated at 45,000.

Mon'te San'to, Gulf of, in the Archipelago. *See* **Athos, Mount.**

Mostar' (old bridge), the capital of Herzegovina, on the Narenta. Pop. 11,000.

Nicop'oli, or Nicop'olis, a city of Bulgaria, on the Danube. It is the see of a Greek archbishop, and a place of considerable trade. Pop. 10,000.

No'vi-Bazar', a sandjak and town in Bosnia. Pop. 15,000.

Olym'pus (the shining), a celebrated mountain to the N. of Thessaly, 9754 feet high. During a great part of the year its summit is covered with snow. The ancient Greeks fancied that it was the residence of the gods.

Par'ga, a seaport in Albania, with an almost impregnable citadel, memorable for the heroism of its inhabitants in the war with Ali Pasha, 1806–19. Pop. 5000.

Philippop'oli (the city of Philip), a town in Thrace, on the Maritza, founded by Philip, the father of Alexander the Great. Pop. 45,000.—42, 8 N. 24, 56 E.

Pin'dus. *See* **Remarks,** page 186.

Plev'na, a town in Bulgaria, the capture of which by the Russians in December 1877 decided the campaign against the Turks.

Pre'vesa, a seaport in Albania, at the entrance of the Gulf of Arta. Pop. 8000.—38, 56 N. 20, 45 E.

Prisrend', a town of Albania, the chief town of the vilayet of the same name, on the Ricka; besides being a fortress, it trades in saddlery, glass, copper, and steel wares. Pop. estimated at 35,000.

Rodos'to, a flourishing commercial town, on the Sea of Marmora. Pop. estimated at 25,000.

Roume'lia, the name of an extensive and fertile region, comprising the vilayets of Eastern Roumelia, corresponding to the northern half of ancient Thrace, and of Western Roumelia, or Salonica, corresponding to ancient Macedonia. Its area is estimated at 16,354 square miles, and its pop. at 1,454,000.

Rustchuk, *roos-tchook'*, a city in Bulgaria, on the Danube, with a considerable trade. Pop. 30,000.

Saloni'ca, or Saloni'ki, the ancient *Thessaloni'ca*, a city beautifully situated on the acclivity of a hill, at the N.E. extremity of the gulf which bears its name. It is strongly fortified, and has a considerable trade. Pop. 70,000. —40, 38 N. 22, 57 E.

Saloni'ca, Gulf of, a spacious bay in the S. of Macedonia.

Samothra'ki, an island in the Archipelago, 14 miles N.N.W. of Imbros. Pop. 1500.

Sa'ros, Gulf of, in the N.E. of the Archipelago.

Save, *säv*, a river which rises in Austrian Illyria, separates Slavonia from Turkey, and joins the Danube near Belgrade.

Schipka Pass, *ship'kä pass*, a pass of the Balkan Mountains, which figured prominently in the Russian campaign of 1877–78.

Scu'tari, a fortified town of Upper Albania, in a rich plain, at the S. extremity of the Lake of Scutari. Pop. estimated at 60,000.—42, 3 N. 19, 33 E.

Selivno, *sä-liv'no*, or **Islione,** *is-li-o'nä*, a town at the S. foot of the Balkan Mountains, on the Tunja, with a great annual fair. Pop. estimated at 20,000.

Se'res, a large town to the E. of the river Struma. It has manufactures of coarse linens and cottons. Pop. 30,000.—41, 5 N. 23, 36 E.

Shumla, *shoom'lä*, a town in Bulgaria, 58 miles S.S.W. of Silistria. It has a considerable trade in silk and hardware. Pop. 45,000.

Silis'tria, a town in Bulgaria, on the Danube. It was unsuccessfully besieged by the Russians in 1854. Pop. 10,657.

Sisto'va, a flourishing commercial

town in Bulgaria, on the Danube. Pop. 20,000.—43, 36 N. 25, 20 E.

Sophia, *so-fe'á*, the capital of Bulgaria, near the river Isker. Though an inland town, its trade is considerable. Pop. 20,541.—42, 36 N. 23, 28 E.

Stru'ma, River, the ancient *Strymon*, which formed the boundary between Thrace and Macedonia; it rises in Mount Hæmus, and falls into the Gulf of Contessa.

Su'li, a mountainous district in the S. of Albania, inhabited by a brave race of Greeks, who were almost exterminated in their wars with Ali Pasha and the Porte in 1808.

Thas'os, or **Thas'o**, a fertile and well-wooded island off the coast of Roumelia. Pop. 6000.

Thrace, or **Roma'nia**, the historical name of a district comprising the vilayets of Constantinople, Adrianople, and Eastern Roumelia.

Tirnova, *teer-no'vá*, the ancient capital of Bulgaria, near the centre, on a tributary of the Danube. Pop. 11,500.

Trav'nik (the grassy place), a fortified town of Bosnia, 45 miles N.W. of Bosna-Serai. Pop. 12,000.

Uskup, *oos'kup*, or **Scopia**, *sko'pi-á*, a town of Roumelia, capital of a sandjak, on the Uskup River. It is a railway terminus, with manufactures of leather. Pop. 10,000.

Vardar', **River**, the *Axius* of antiquity, rises near the northern frontier of Macedonia, and flows into the Gulf of Salonica.

Var'na (the fortress), the ancient *Odessus*, a seaport of Bulgaria, on a bay of the Black Sea, with considerable trade. Here the British and French forces embarked in 1854 to invade the Crimea. Pop. 24,649.

Widdin, *vid'din*, a city in Bulgaria, on the Danube, opposite Kalafat, in Roumania. It is the residence of a Greek archbishop, and has numerous mosques, and a trade in wine, corn, and rock-salt. Pop. 13,602.

Zwor'nik, a town in Bosnia, on the Drina. Pop. 10,000.

ROUMANIA, SERVIA, AND MONTENEGRO.

ROUMANIA.

THE Kingdom of Roumania is bounded on the E. by the Black Sea; on the S. by a conventional line from the Black Sea to the northern bend of the Danube, and thence by the Danube itself; on the W. by the Carpathian Mountains, which separate it from Austria-Hungary; and on the N. by the river Pruth, and the Kilia or northmost mouth of the Danube, which separate it from Russia. The area is 49,463 square miles, and the population 5,370,000.

Roumania is named after the inhabitants, who boast themselves descended from Trajan's Roman colonists. Their boundary with Bulgaria, where it ceases to be the Danube, runs along Trajan's Wall, the remains of which show a double, and in places a triple, line of earthworks. The country consists of the principality of Moldavia, on the rivers Sereth and Pruth; the principality of Wallachia, on the Danube; and the districts added by the Berlin Treaty of 1878, viz., the delta of the Danube, and the Dobrudscha south of the delta, between the Danube and the Black Sea.

The surface is for the most part flat or undulating, except in the W., where spurs from the Carpathians give it a somewhat mountainous character. The Dobrudscha is marshy as well as flat, waving, during the greater part of the year, with luxuriant grass. Nevertheless, the spring melting of the snows makes it into a slough of mud, and the suns of high summer convert the slough into a desert. The winter's cold is as excessive as the summer's heat, the Danube itself being frozen over for about six weeks every year. The fertility of the soil makes up for the want of agricultural skill; but the crops often suffer from the ravages of locusts, or perish from drought before reaching maturity. The greater part of the country is in pasture, and the main wealth of the people consists in horses, cattle, sheep, and swine. Bees are extensively reared in Moldavia, which, in contrast with Wallachia, has immense forests. The delta of the Danube is the haunt of water-fowl innumerable. Minerals are said to be abundant, but the only one extensively worked is rock-salt. Manufactured articles are imported. The exports are cattle, driven overland to the markets of the neighbouring countries; and grain, consisting of wheat, barley, and maize, shipped at Galatz, a Danubian port. Galatz is also the seat of the international commission which controls the lower Danube, levying imposts, and spending the revenue in maintaining the river-police, and in improving the navigation of the mouths. As no river-dues are levied except by this commission, Roumania, Servia, and Bulgaria are, so far, commercially one. The Sulina mouth is now navigable by very large vessels. Passengers avoid the malaria and monotony of the delta and of the lowest reaches of the river by taking the railway from Kustendji on the Black Sea to Tchernavoda on the Danube.

The Roumanians are really a mixed race, the original stock having been mingled with Greek, Gothic, Sclavic, and Turkish elements. The native language, a sort of corrupt Latin, is still but emerging from the status of a peasants' dialect; and in consequence of that, French is the favourite medium of intercourse with the wealthy. The established religion is Christianity according to the Eastern rite. On the Black Sea, one-third of the population is Mohammedan; and

throughout the whole country Jews are dispersed, who, as money-lenders, and as directing almost the whole commerce of the country, are thoroughly detested. Schooling is by law gratuitous and compulsory; but the law is in this respect nearly a dead letter except in towns. The want of a native middle-class increases the difficulty of raising the intellectual condition of the people. Since 1881, in which year Roumania was raised from the rank of a principality to that of a kingdom, the government has been a hereditary monarchy limited by a parliament of two houses, the members of both houses being indirectly elected by the people. The king is a prince of the Hohenzollern House. The seat of government is BUCHAREST, formerly capital only of Wallachia, and the largest town in south-eastern Europe after Constantinople and Buda-Pesth. It used to be called a minor Paris, because of its numerous *cafés* and questionable places of amusement: it now possesses a worthier claim to that distinction in wide and well-paved streets, handsome buildings, and large, well-kept parks.

SERVIA.

THE Kingdom of Servia is surrounded by European Turkey, except on its northern frontier, where it is separated from Austria-Hungary by the Save and Danube, and from a corner of Roumania by the Danube. Its area is 18,800 square miles, and its population 1,700,000.

The surface is mountainous, though few summits exceed 3000 feet in height; and to a large extent forest-clad, the oak abounding. At lower elevations, walnuts, chestnuts, and pear-trees prevail. The soil in the valleys is fertile, and equally fitted for the rearing of cattle and for corn and wine. Cotton is grown in the warmer spots; for the heat of summer is as marked as the rigour of winter. Most of the trade is with Austria-Hungary, the chief exports being oak-timber, and swine fed on the mast of the forests.

The Servians are a Sclavonic race, and Christians of the Eastern rite. Only in the southern districts, which were added to Servia by the Berlin Treaty of 1878, are Mohammedans found to the extent of about one-third of the population.

Since 1882, in which year Servia was raised from the rank of a principality to that of a kingdom, the government has been a hereditary monarchy under a native prince, limited by a parliament of two chambers, the upper one, which consists of seventeen members nominated by the king, being always in session. The lower chamber, called Skuptschina, elected by the people, meets at the small town of Kragojevatz, which was the ancient capital. The capital is now BELGRADE, situated at the confluence of the Save with the Danube, a place important as an entrepôt of trade, but still more so on account of its fortress, which occupies the tongue of land between the two rivers.

MONTENEGRO.

MONTENEGRO is the Italian translation of the native name Tzernagora, and of the Turkish name Karadagh, all three signifying "Black Mountain," which is a just description of the country, clothed as it is with dark forests of pine, oak, beech, and other trees. Kutch Kom, the culminating point of the Dinaric Alps, is in the E., 9575 feet above the level of the sea. The area is 1710 square miles, and the population 245,000.

So rocky is the surface generally, that few oxen are kept; on the other hand, sheep, goats, and swine are reared in such numbers as to leave a surplus of produce, in the shape of wool and cheese, for exportation. The climate, everywhere healthy, varies in respect of temperature with the elevation and exposure, so that low down on the Montenegrin half of Lake Scutari, even olives and figs, pomegranates and oranges, thrive. The carp-fisheries on Lake Scutari are valuable; and large quantities of that fish are sent, salted and dried, to Trieste and Vienna.

The natives are Servian Sclaves, and speak pure Servian. They are Christians of the Eastern rite, except about 15,000 Roman Catholics and 10,000 Mohammedans. They are emerging from what may be called a noble barbarism, in which, without letters and without domestic comforts, they maintained their independence against the Turks, being themselves robust and hardy, chaste, and, to all except the Turks, hospitable. Their first newspaper dates from 1870, and their

first bookseller's shop from 1879. Schools are only beginning to be thought of. Towns there are none, the capital, CETTIGNE, being only a village of 1400 inhabitants, with a convent and the palace of the Hospodar, as the hereditary prince of Montenegro is called. By the Berlin Treaty of 1878, Montenegro was recognised as an independent principality; additions were made to its territory, including some seaboard on the Adriatic, with the port of Antivari; and the right was conferred upon it of navigating the river Boyana through Turkish territory to the sea. By the same instrument, Montenegro may not have any flag or ship of war; nor can the war-ships of any nation enter its waters, the maritime and sanitary police of which is maintained by Austria-Hungary. The legislative authority is vested in a council of eight members, of whom four are nominated by the Hospodar, and four elected by the men who are bearing, or have borne arms, in the service of the state.

EXERCISES.

What are the boundaries of Roumania? Which of these boundaries separate it from Austria-Hungary and from Russia respectively? What is its area? Its population? Account for the name Roumania. Name the two principalities in Roumania. What additional territories were acquired in 1878? Where only is the surface mountainous? What changes come over the Dobrudscha according to the season of the year? From what do the crops frequently suffer? Mention a fact proving the severity of winter. Wherein consists the main wealth of the inhabitants? Which of the principalities is the richer in forests? In which of them are bees extensively reared? Where do water-fowl abound? Name the only mineral extensively worked? What grains are exported, and where? What authority controls the lower Danube? What countries are, in respect of river-dues, one with Roumania? Name the termini of the railway by taking which passengers avoid steaming up the delta and lowest reaches of the Danube. What four elements of race are mingled with the Roumanian stock? Of what nature is the native dialect? What language is spoken by the wealthier classes? What is the established religion? Where do Mohammedans form one-third of the population? Why are the Jews detested? In what condition are the schools? Describe the form of government. Name the capital. What rank does it hold among the large towns of south-eastern Europe? Compare it with Paris.

On how many sides is Servia inclosed by European Turkey? From what countries is it separated by the Save and Danube? What is its area? Its population? Describe its surface. What fruit-trees prevail in the lower forests? What is grown in the fertile valleys? What in the warmest spots? What are the chief exports, and to what country? How is it that swine are cheaply reared? Of what race and religion are the Servians? Where do Mohammedans form one-third of the

population? What is the form of government? Which of the two chambers is always in session? What is the lower one called, and where does it sit? Name the present capital. On what does its importance chiefly depend?

Explain the name Montenegro. Is it truly descriptive of the country? What Alps overspread Montenegro? Name the highest summit. What is the area of Montenegro? Its population? Why are few oxen kept? What surplus produce of the flocks is exported? Where is the mildest portion of Montenegrin territory? What fruits come there to perfection? Where is carp caught in quantities, and how are they disposed of? Of what race and religion are the Montenegrins? About how many Roman Catholics and Mohammedans are among them? In what respects may the semi-barbarism of the inhabitants be called noble? Mention facts showing that the Montenegrins are only beginning to share in modern civilisation. What sort of place is the capital, Cettigne? What advantages were gained by Montenegro through the Berlin Treaty of 1878? What disabilities were imposed upon her by that treaty? What is the native title of the prince? How are the eight members of his council appointed?

DESCRIPTIVE TABLE.

Alexinatz, *al-ex'e-nätsh,* a town of Servia, which figured prominently in the Servian war of independence, on the Liprizza or Bulgarian Morava. Pop. 3954.

Anti'vari, a town on the Adriatic, ceded to Montenegro by the Berlin Treaty of 1878. Pop. about 6000.

Baba-Dagh', a town of Roumania, in the Dobrudscha, with a considerable trade carried on by its port Kera-Kerman, on Lake Rassein. Pop. 10,000.

Belgrade', the capital of Servia. Pop. 26,970. *See* REMARKS, page 196.

Brahilov', a fortified town of Roumania, on the Danube, with sturgeon fisheries and a great trade in corn. Pop. 28,000.

Bu'charest, or more correctly **Bookaresht** (the city of enjoyment), the capital of Roumania, on the Dumbovista, a tributary of the Danube. Pop. 221,805.

Cettigne, or **Zettigne,** *chet-een'yā,* the capital of Montenegro. *See* REMARKS, page 197.

Dobrud'scha, a marshy district, between the Danube and the Black Sea, added to Roumania by the Berlin Treaty of 1878.

Dulcigno, *dool-cheen'yo,* a seaport town of Montenegro, on a rocky peninsula in the Adriatic. Pop. about 6000.

Galatz, or **Gallacz,** *gä'lätch,* a commercial town of Roumania, on the Danube, near its junction with the Pruth. Pop. estimated at 80,000.

Giurgevo, *joor-jā'vo* (St George's town), a town of Roumania, the terminus of the Bucharest railway, opposite Rustchuk, in Bulgaria. Pop. 15,000.

Jas'sy, or **Yas'se** (the marshy place), a town of Roumania, the capital of Moldavia, on an affluent of the Pruth, 200 miles N.N.E. of Bucharest; it has a considerable trade in agricultural produce. Pop. 90,000.

Kalafat', a town of Roumania, on the Danube, opposite Widdin, in Bulgaria. Pop. 2280.

Krago'jevatz, the ancient capital of Servia, in the centre of the kingdom, on a tributary of the Morava.

Krajo'va, a town in the W. of Roumania, near the Schyl, a tributary of the Danube. It has an active trade in salt, and is the residence of many of the rich *bojars* or nobles. Pop. [illegible]

Kustend'ji, a seaport town of Roumania, on the Black Sea, at the termination of Trajan's Wall. It is also a railway terminus.

Molda'via. *See* ROUMANIA, page 193.

Mora'va (the marshy river), a river which rises in Bulgaria, flows through Servia, and falls into the Danube near Semendria.

Nick'sics, a fortress, embraced in the additional territory ceded to Montenegro by the Berlin Treaty of 1878.

Nis'sa, or **Nish**, a strongly fortified town in Servia, on the Nissava, noted for its warm baths. Pop. 12,817.

Podgorit'za (near the hill), a town and fortress, embraced in the additional territory ceded to Montenegro by the Berlin Treaty of 1878. Pop. estimated at 7500.

Pruth, a river which rises in Hungary, and, after forming in its course the boundary between Roumania and Russia, falls into the Danube below Galatz.

Semen'dria, a fortified town of Servia, on the Danube, at the influx of the Jessava, 24 miles S.E. of Belgrade. Pop. 12,000.

Sereth, *ser-et'* or *sā-ret'*, a river which rises in the Carpathians, and, after traversing Moldavia, in Roumania, falls into the Danube 5 miles W. of Galatz.

Tchernavo'da, a town of Roumania, on the Danube, 39 miles by rail W.N.W. of Kustendji. It is a railway terminus.

Ter'govist, a town in Roumania, on the Islonitza, 48 miles N.W. of Bucharest. Pop. 5000.

Timok, *tee'mok*, a river, forming part of the boundary between Bulgaria and Servia, joining the Danube 18 miles N.N.W. of Widdin, after a N.E. course of 100 miles.

Walla'chia. *See* ROUMANIA, page 193.

GREECE

Is bounded N. by Turkey; W. and S. by the Mediterranean; E. by the Archipelago. It contains 25,441 square miles, and a population of nearly 2,000,000.

Divisions.—For administrative purposes, Greece is divided into nomarchies, which are subdivided into eparchies, and these again into demes.

Divisions.	Nomarchies.	Chief Towns.
Continental Greece.	Thessaly	Larissa, Trikhala, Volo.
	Attica and Bœotia	ATHENS, Piræus, Thebes.
	Phthiotis and Phocis	Lamia, Salona.
	Acarnania and Ætolia	Missolonghi, Arta.
Peninsular Greece: Peloponnesus or Morea.	Argolis and Corinth, with the western Sporades	Nauplia, Argos, Spezzia, Hydra.
	Achaia and Elis	Patras.
	Arcadia	Tripolitza.
	Messenia	Calamata.
	Laconia	Mistra.
Insular Greece.	Eubœa or Negropont, with the northern Sporades	Chalkis.
	The Cyclades	Hermopolis, in Syra.
	Kerkyra or Corfu, with Paxos and Leucas or Santa Maura	Kerkyra or Corfu.
	Kephalonia, with Ithaca	Argostoli.
	Zakynthos or Zante, with Cerigo	Zakynthos or Zante.

Islands.—The last three nomarchies embrace the Ionian Islands. The Cyclades are Andros, Tenos, Naxos, Paros, Melos, Siphnos, Zea, Syra, Delos, and Santorini. The western Sporades are Hydra and Spezzia; the northern Sporades, Skyros, Pelagonisi, Skopelos, and Skiathos. Off the coast of Attica are Koluri, the ancient Salamis, and Ægina. By far the largest of all the islands is Eubœa.

Gulfs.—Patras, Lepanto, Ægina, Nauplia, Kolokythia, Koron, Volo.

Capes.—Klarenza, Gallo, Matapan, Malia or St Angelo, Skillo, Colonna.

Mountains.—Pindus, Ossa, Pelion, Othrys, Œta, Parnassus, Helicon, Taygetus or Pentedactylon.

Lakes.—Topolias, the ancient Copais.

Rivers.—Salembria (Peneus), Aspropotamo (Achelous), Rouphia (Alpheus), Basilipotamo (Eurotas).

REMARKS.

Greece lies between 36° 23′ and 39° 53′ N. lat., and between 21° and 26° E. long. Its length, from Cape Matapan to the northern boundary, is about 270 miles; its breadth, from Cape Klarenza to the east coast, about 155 miles. The frontier with Turkey, starting from Kara Derbend on the Archipelago, runs westward below Metzovo, a place much coveted by Greece because of its fortress, which commands a pass in the Pindus range, to the river Arta, and thence to the Gulf of Arta on the Adriatic.

The coast-line of Greece, because of its outs and ins, is longer in proportion to the area contained than that of any other European country except our own. Both the mainland and the islands are overspread with mountains curving in so as to form nearly circular basins in the interior, and horse-shoe-shaped hollows towards the shore. Each of these hollows and basins formed anciently a separate state; and they now form the basis of the administrative divisions of the country. In the Morea, the central basin is Arcadia, which has given to our language an epithet implying pastoral simplicity; further north is the Bœotian basin, with a fertile plain, at the bottom of which lies Lake Topolias; still farther north is the Thessalian basin, inclosing the largest plain, a land of corn and wine and oil, of flocks and herds, of horses and battle-fields. In height, the mountains of Greece rank with those of Italy: the highest of all is Guiona, in Œta, 8241 feet; and the next highest, Lycorea, 8068 feet, in the Parnassus range. Being mostly of limestone, they abound in caverns; and subterranean river-channels are common enough to have received a special name,

katabothra. The most signal instance is in connexion with Lake Topolias, which is fed by the river Mauronero (Cephissus), but sends no visible river to the sea. None of the rivers are of use for navigation, and the smaller ones are dry in summer. During that season the greater part of Lake Topolias becomes a reedy marsh; and then from it, as from many a sea-marsh, at Corinth and Nauplia, for instance, offensive and noxious malaria arise. Otherwise, the climate is eminently healthy. The highest mountains are covered with snow during the greater part of the year; but in the valleys, and especially along the coast, winter is scarcely known. The summer's heat is oppressive: in the lower grounds it scorches the pasture, so that the cattle, chiefly sheep and goats, are then driven to the mountains.

The Greeks of to-day bear a marked resemblance to those of antiquity. They are fond of talk and argument: to exercise their wit is a necessity of life, and their admiration of cleverness in word and deed is greater than their detestation of mental or even moral obliquity. Among industrial pursuits, their predilection is for trade and navigation. The one article in which Greece excels is the Corinthian grape, immense quantities of which are exported in the form of dried currants. Their civilisation is lop-sided. On the one hand, their mercantile navy is, in proportion to population, abreast of that of other maritime countries; Greek merchants, besides almost monopolizing the Levantine trade, are found in all financial centres and seats of commerce; and Greek schools, graded as in Germany from the humblest up to the universities of Athens and Corfu, have created a nation of readers and a disproportionately large class of writers. On the other hand, the Greeks barely supply themselves with corn; the processes of agriculture remain old-fashioned, oxen or horses treading out the corn; the oil and the wine are so spoiled in the making, that little of either reaches the great marts; much-needed works of drainage and irrigation are not attempted; carriage-roads exist only in few places and for short distances, a want all the more notable now that a railway of six miles has been made from the capital to its port, the Piræus; and the finances are in such a state that the country has no credit abroad. The established religion, to which almost the whole population belongs, is Christianity according to the Eastern rite. The government is a hereditary monarchy, limited by a single chamber, the members of which are elected for four years by ballot and manhood suffrage. ATHENS, the academic as well as the political capital, is chiefly interesting because of ancient sites and the remains of ancient buildings. The rock of the Acropolis, and the hump of the Areopagus still rise there in durable limestone. The ruins of the Parthenon and Erechtheum crown the Acropolis; and west of it stand colossal the few unfallen pillars belonging to the temple of Jupiter Olympius. The temple of Theseus, the best preserved of all the ancient buildings, serves as an antiquarian museum.

EXERCISES.

What are the boundaries of Greece? What is its extent in square miles? What is the number of its inhabitants? Name the nomarchies of Continental Greece, of Peninsular Greece, of Insular Greece. What are the chief towns of Thessaly? Of Attica and Bœotia? etc. Which is the largest island? Name the Cyclades, the northern Sporades, the western Sporades, and two islands off the coast of Attica.

Where is the Gulf of Lepanto? Of Ægina? Where are Cape Matapan, Mounts Parnassus and Taygetus, Athens, Thebes, Tripolitza, Hydra, Nauplia, Paros? etc.

Between what degrees of latitude and longitude is Greece situated? What are its length and breadth? Trace its frontier with Turkey. What is remarkable about its coast-line? What is the character of its surface? Name the three mountain-basins. Which of them has given an epithet to the English language? Characterize the Thessalian plain. Do the mountains rank with the Apennines or the Alps? Which and where are the highest summits? What are *katabothra?* Give the most signal example. What of the rivers? State the only exception to the healthiness of the climate. What custom proves the excessive heat of summer?

Describe the Greek character. What industrial pursuits do they prefer? Name the one article in which Greece excels. Wherein is the civilisation of the Greeks lop-sided? What about church and school? Name the two university towns. What is the form of government? For what is Athens chiefly interesting? Name the two ruins on the Acropolis. What ruins stand west of it? To what use has the temple of Theseus been put?

DESCRIPTIVE TABLE.

Ægi'na, Gulf of, the *Saronic Gulf* of the ancients, in the N.E. of the Morea.

Ægi'na, an island in the Gulf to which it gives name. Pop. 6103.

Amaxichi, *ă-măx-e'he*, a seaport in the E. coast of the island of Santa Maura or Leucadia, of which it is the capital. Pop. 6000.

An'dros, an island in the Archipelago, S. of Eubœa. Pop. 19,674.—37° 50′ N. lat., 24° 50′ E. long.

Antip'aros, a small island in the Archipelago, between Paros and Siphanto. It has a celebrated grotto of crystalline rocks. Pop. 500.

Arcadia, *ar-kā'de-ă*, Gr. pron. *ar-kă-de'a*, a seaport on the W. coast of the Morea. Pop. 4000.

Archipel'ago. *See* TURKEY IN EUROPE, p. 191.

Ar'gos, a town in the Morea, nomarchy of Argolis, situated on the Gulf of Nauplia. Pop. 8981.

Argos'toli, capital of the island of Cephalonia, on its S.W. side. Pop. 7871.

Ar'ta, a town of Thessaly, on a river of the same name. Pop. 5000.

Ar'ta, Gulf of, between Albania and Greece, extending about 25 miles inland.

Aspropot'amo (the white river), the ancient *Achelous*, a river rising in Mount Pindus, on the borders of Thessaly, and falling into the mouth of the Gulf of Patras.

Ath'ens, anciently the capital of *Attica*, and now of the modern kingdom of Greece.—Pop. 63,374.—37, 58 N. 23, 44 E. *See* REMARKS, page 201.

Calama'ta, a seaport town in the Morea, capital of the nomarchy of Messenia. Pop. 7609.

Cas'tri, the ancient *Delphi*, a small town in the nomarchy of Phthiotis and Phocis, situated on the S. side of Mount Parnassus.

Cephalonia, *sef-a-lo'ne-ă*, Gr. pron. *kef-ă-lo-ne'ă* (the island with the headlands), the largest of the Ionian Islands. It is remarkably fertile, and the climate is very mild. Pop. 80,513.—38, 15 N. 20, 33 E.

Cerigo, *cher'e-go*, the ancient *Cythe'ra*, one of the Ionian Islands, to the S. of the Morea. Pop. 10,637.—36, 13 N. 23, 0 E.

Chalcis, *kal'sis* (*Turkish* **Eg'ripo**), a fortified seaport, the capital of Eubœa, on the Euripus. Pop. 6000.—38, 28 N. 23, 35 E.

Colon'na, Cape (the headland of the pillars), the ancient *Sunium*, a promontory forming the southmost point of Attica.—37, 39 N. 24, 2 E.

Corfu, *kor-foo'*, the ancient *Corcy'ra*, one of the Ionian Islands, off the coast of Albania, It is of considerable political importance, as being the key of the Adriatic; and is the first in rank, though only the second in size, of the Ionian Islands. Pop. 106,109.

Corfu, the capital of the above island. Pop. 16,515.—39, 37 N. 19, 56 E.

Cor'inth, one of the most distinguished cities of ancient Greece, now little more than a village, situated near the Isthmus of Corinth. Pop. 6047.

Co'ron, Gulf of, or Gulf of Kalama'ta, anciently called the Gulf of *Messenia*, in the S.W. of the Morea.

Co'ron, a fortified seaport in the Morea, on the W. side of the Gulf of Coron. Pop. 5000.—36, 47 N. 21, 58 E.

Cyc'lades, a group of islands in the Archipelago, about 53 in number, famous for their rich and varied scenery. Pop. 123,299.

Eubœ'a, or Ne'gropont, an island separated from continental Greece by the channel of Talanta, the ancient *Euri'pus*, remarkable for the irregularity of its tides. Eubœa is 100 miles long and 10 broad, and is connected with the mainland by a bridge across the channel of Talanta. Pop. 95,136.

Euro'tas, or Vasi'li, or Basi'li, a river of the Morea, which flows into the Gulf of Kolokythia.

Gall'o, Cape, the S.W. extremity of the Morea.—36, 43 N. 21, 52 E.

Hel'icon, called also **Zago'ra**, a mountain in Bœotia, N. of the Gulf of Lepanto, celebrated in ancient mythology as a favourite haunt of the Muses.

Hydra, *he'drâ*, a small rocky island off the E. coast of the Morea. Pop. 20,000. On its N. side is an important town of the same name. Pop. 7380.

Io'nian Isles, a group off the coasts of Albania and Greece, consist of Corfu, Zante, Cephalonia, Ithaca, Santa Maura, Paxo, Cerigo. Total area, 1041 square miles. Pop. 231,165. In 1815 they were erected into a republic under the protection of Britain, and in 1864 were re-united to Greece.

Ithaca, *ith'a-ka*, or **Theaki**, *the-â'ke* (hard and rugged island), one of the above islands, to the N.E. of Cephalonia. Homer has given it celebrity as the kingdom of Ulysses. Pop. 9900. —38, 22 N. 20, 43 E.

Kolokythia, Gulf of, *ko-lo-ke-the'â*, anciently called the Gulf of *Laconia*, in the S. of the Morea.

Laris'sa, the capital of Thessaly, situated on the Selembria. Pop. 13,169. —39, 38 N 22, 28 E.

Lepan'to, the ancient *Naupactus* (the place of ships), a small seaport in Ætolia, at the entrance of the Gulf of Lepanto. Pop. 4326.—38, 23 N. 21, 50 E.

Lepan'to, Gulf of, anciently the Gulf of Corinth, an arm of the Ionian Sea, above 70 miles in length. It separates continental Greece from the Morea.

Livadi'a, the ancient *Lebade'a*, a town in the nomarchy of Attica and Bœotia; it was ruined by the war of independence, and is now an unimportant place. It was so important at one time that the whole of that section of Greece to which it belongs, viz., all between the Peloponnesus on the S. and Thessaly and the Turkish vilayet of Janina on the N., came to be called Livadia, and is so called popularly to this day. Pop. 5000.

Maina, *mi'nâ*, a mountainous district in the S. part of the Morea, inhabited by a brave and hardy people. The Mainotes, like the Sphakiotes in Crete, were never completely subjugated by the Turks.

Ma'lea, or St An'gelo, Cape, the S.E. extremity of the Morea.—36, 25 N. 23, 12 E.

Matapan', Cape, the most southerly point of the Morea, and, except Tarifa in Spain, of the continent of Europe. It was the *Tænarium Promontorium* of the ancients.—36, 23 N. 22, 29 E.

Mico'ni, an island in the Archipelago, one of the Cyclades.

Milo, *me'lo*, the ancient *Melos*, a small island in the Archipelago. Its soil is volcanic and extremely fertile. Pop. 3500.

Missolonghi, *mis-so-long'ghe* (in the midst of a lagoon), a town in the nomarchy of Acarnania and Ætolia, 24 miles W. of Lepanto. Here the poet Lord Byron died, on 19th April

1824, while promoting the cause of Grecian liberty. Pop. 6324.—38, 22 N. 21, 26 E.

Mis'tra, a town in the Morea, nomarchy of Laconia, near the site of ancient Sparta. Pop. 3595.

More'a, the ancient *Peloponne'sus*, a peninsula united to Northern Greece by the Isthmus of Corinth. Its length is about 140 miles, and its breadth 120; its area is 9000 square miles. It is famed for the beauty of its scenery and for its classical interest. Pop. 645,000.

Nau'plia, or Nap'oli, Gulf of, the *Argolic Gulf* of antiquity, on the E. of the Morea.

Nau'plia (new city), or **Nap'oli di Roma'nia**, a fortified seaport near the head of the Gulf of Nauplia. Pop. 4598.

Navari'no, a seaport in the S.W. of the Morea, nomarchy of Messenia, with a fine harbour. Here, in October 1827, the Turkish and Egyptian fleets were destroyed by the allied squadrons of Britain, France, and Russia. Pop. 2000.

Nax'ia, a fertile island in the Archipelago, E. of Paros: it is the largest of the Cyclades. Pop. 20,000.

Ni'o Island, the ancient *Ios*, one of the Cyclades, in which, it is said, Homer died about the year 900 B.C. Pop. 3700.

Os'sa, a mountain in Thessaly, to the S.E. of Olympus, from which it is separated by the Vale of Tempe.

Parnas'sus, or Liakura, a celebrated mountain in Phocis, and the highest in Greece, being 8068 feet above the sea. According to the ancients, it was the favourite resort of Apollo and the Muses. Near Castri, on its S. slope, still flows the Castalian spring.

Pa'ros, an island in the Archipelago, nearly in the centre of the Cyclades, famed for its quarries of fine white marble. Pop. 6000.

Pa'tras, a seaport in the N.W. of the Morea, nomarchy of Achaia and Elis, beautifully situated on an eminence near the entrance of the Gulf of Lepanto. Pop. 25,494.

Pax'o, one of the Ionian Islands, to the S. of Corfu. Pop. 5009.—39, 13 N. 20, 9 E.

Pe'lion, a celebrated mountain in Thessaly, S. of Ossa.

Piræ'us, the port of Athens, and about 5 miles S.W. of that city, with which it is connected by a railway. Pop. 21,055.

Po'ros, the ancient *Sphæria*, an island in the Gulf of Ægina, separated from the Morea by a narrow channel. Pop. 6035.

Rouphia, *roo-fe'â*, the ancient *Alpheus*, a river of the Morea, which falls into the Mediterranean Sea.

Sal'amis, or Koluri, an island in the Gulf of Ægina, where the Greeks gained a memorable naval victory over the Persians, B.C. 480. Pop. 4000.—37, 57 N. 23, 32 E.

Solo'na, the ancient *Amphissa*, a town in the nomarchy of Phthiotis and Phocis, near Mount Parnassus. Pop. 6000.

San'ta Mau'ra, the *Leucadia* of the ancients, one of the Ionian Islands. Pop. 21,000.—38, 50 N. 20, 42 E.

Santorin, *sân-to-reen'*, or **Santorini**, *sân-to-re'ne*, the ancient *Thera*, an island in the Archipelago, of volcanic origin. Pop. 13,063.

Satalge, *sâ-tâl'gā*, a town in Thessaly, famous for the battle of Pharsalia, fought in its neighbourhood between Cæsar and Pompey, B.C. 48. Pop. 5000.

Selembri'a, the ancient *Peneus*, a river in Thessaly, which issues from Mount Pindus and flows through the Vale of Tempe.

Skil'lo, Cape, a promontory in the E. of the Morea.—37, 28 N. 23, 32 E.

Skyros, *ske'ros*, an island in the Archipelago, E. of Eubœa. Pop. 3029.

Spezzia, *spet'se-a*, an island in the Archipelago, at the entrance of the Gulf of Nauplia. Pop. 8443. The town of Spezzia is on the N.E. shore. Pop. 3000.

Syra, *se'râ*, an island in the Archipelago, one of the Cyclades, a place of commercial importance. The proper name of the capital is Hermopolis; but the island is so small, and the town so important, that the name Syra is used for both island and town. Pop. 27,000.—37, 30 N. 24, 55 E. Syra, the capital, is on the E. shore. Pop. 21,500.

Talan'da, a town in the nomarchy of Phthiotis and Phocis, near the channel of the same name, which separates Eubœa from the mainland. Pop. 5000.

Tay'getus, a mountain in the Morea; its loftiest summit is 7903 feet high.

Thebes, *theebz*, or **Thiva**, *te'vâ*, a town in the nomarchy of Attica and Bœotia, on the site of the ancient city of the same name. Pop. 3500.

Thes'saly, a fertile province in the N. of Greece, ceded by Turkey in 1881. Area 5100 sq. m.; pop. 299,953.

Tino, *te'no*, or **Tinos**, *te'nos*, an

island in the Archipelago, one of the Cyclades. Pop. 11,100.

Trikhala, or **Tricala**, *tre'kâ-lâ*, a town in Thessaly, near the Selembria. Pop. 12,000.

Tripolit'za, a town in the centre of the Morea, nomarchy of Arcadia. Pop. 10,057.—37, 30 N. 22, 22 E.

Vo'lo, a seaport in Thessaly, on the N. side of the gulf of the same name. Pop. 2000.

Vo'lo, Gulf of, on the S.E. coast of Thessaly.

Zan'te, the ancient *Zacynthus*, one of the Ionian Islands, on the S. of Cephalonia. Pop. 44,557.

Zan'te, the capital of the above island, on its eastern shore. Pop. 16,250.—37, 47 N. 20, 54 E.

Ze'a, the ancient *Ceos*, one of the Cyclades, near Cape Colonna. Pop. 5000.

RUSSIA IN EUROPE

Is bounded N. by Norway and the Arctic Ocean; W. by Sweden, the Baltic, Prussia, Austria-Hungary, and Roumania; S. by Roumania, the Black Sea, and the Caucasus Mountains; E. by the Caspian Sea, the River Ural, and the Ural Mountains. It contains about 2,200,000 square miles, and a population of nearly 80,000,000.

Divisions.—Russia in Europe comprises, besides Russia proper, the grand-duchy of Finland, the kingdom of Poland, and the lieutenancy of the Caucasus, which last includes a large territory S. of the Caucasus, and belonging, therefore, geographically to Asia. Russia proper is divided into 50 governments, two of which, Perm and Orenburg, include districts geographically Asiatic, because lying E. of the Ural Mountains. The governments of Russia proper are named after the administrative centre in each, except where, in the following list, the name of the administrative centre is added in parentheses to the name of the government:—

Great Russia: Archangel, Vologda, Olonetz (Petrozavodsk), Novgorod, Jaroslav, Kostroma, Nijni-Novgorod, Vladimir, Tver, Pskov, Smolensk, Kaluga, Tula, Moscow, Riazan, Tambov, Orel, Kursk, Voronetz.

Little Russia: Tchernigov, Kiev, Poltava, Kharkov.

South Russia: Taurida (Simferopol), Don Cossacks (Novo-Tcherkask), Ekaterinoslav, Kherson, Bessarabia (Kichinev).

East Russia: Astrakhan, Samara, Orenburg, Ufa, Perm, Viatka, Kasan, Simbirsk, Penza, Saratov.

West Russia: Podolia (Kaminietz), Volhynia (Jitomir), Grodno, Minsk, Moghilev, Vilna, Vitebsk, Kovno.

Baltic Provinces: St Petersburg, Esthonia (Revel), Livonia (Riga), Courland (Mitau).

Finland, Poland, and the Caucasus are also divided into governments, named in like manner, for the most part, after their respective administrative centres.

Islands.—In the Baltic, Aland, Dago, Oesel. In the Arctic Ocean, Kolguev, Waigatz, Novaia Zemlia, Franz Joseph Land, Spitzbergen.

Gulfs.—Gulfs of Bothnia, Finland, Riga; White Sea, with its three gulfs, Kandalaksha, Archangel, and Onega.

Mountains.—Valdai Hills, Ural Mountains, Caucasus.

Lakes.—Ladoga, Onega, Peipus, Ilmen, Enara.

Rivers.—Volga, Don, Dnieper, Dniester, Bog, Ural, Oka, Kama, Kuban, Terek, Vistula, Niemen, Southern Dwina, Neva, Northern Dwina, Petchora.

REMARKS.

European Russia extends from about 40° 20′ to 70° N. lat., and from about 18° to 60° 45′ E. long. Its length, from the southern extremity of the Crimea to the Arctic Ocean, is 2000 miles; its breadth, from the Baltic to the Ural Mountains, on the parallel of 56°, is 1500 miles.

Russia proper, Poland, and Finland belong to the great European plain, and indeed constitute the far greater part of it. The mountainous watershed which divides western Europe into northern and southern slopes is here represented by a scarcely perceptible swell of the surface, which follows, with many a winding, a north-easterly direction on the whole, from Poland to the Ural Mountains. This swell of the surface culminates in the Valdai Hills, south of St Petersburg, which, though 1200 feet above the ocean, rise only about 600 feet above the surrounding country. The windings of the swell may be traced on the map by the water-parting, where the rivers flow either southward to the Caspian and Black Seas, or northwards to the Baltic and the Arctic Ocean. The only parts of Russia proper where mountains occur are Taurida, in the extreme south, and the eastern frontier: the south coast of the Crimea, in Taurida, rises into mountains 4000 feet high, and the Urals on the eastern frontier attain, about the middle of their length, a height of 5540 feet. Outside of Russia proper, the Caucasus, a mountainous region about a hundred miles broad, contains summits surpassing even Mont Blanc, the highest of all being Elburz, 18,256 feet, situated in Cis-Caucasia, at the head-waters of the rivers Kuban and Terek. These two rivers, the former flowing westward, and dividing so as to form Taman Island, between the Sea of Azov and the Black Sea, the other flowing eastward to the Caspian, on which it forms a large

delta, are considered by the Russians as the boundaries between Europe and Asia in this direction.

Various in character, as might be expected from the immense extent of the Russian plain, are its several parts. The north is occupied by wet bogs called *tundras,* habitable only where they grow reindeers' food, the lichen *Cladonia rangiferina.* The south, again, is occupied from the Dnieper eastward by *steppes,* treeless flats yielding a scanty herbage in spring, and at other seasons either scorched or frozen into barrenness. North-west of the Caspian, up to 49° N. lat., the steppes lie below the ocean-level, and abound with salt-marshes; the surface of the Caspian itself being 84 feet lower than that of the Black Sea. Between the *tundras* and the *steppes* lie first the forest region, extending to 60° N. lat., and then, below that, the grain region. The forest region of Russia is by far the largest in Europe: it covers almost the whole of the Vologda government, and occupies half the surface of Finland. Besides timber, it yields tar, potashes, and furs. The grain region is of various quality. The most fertile belt stretches from the frontier of Russia with Roumania and Austria-Hungary north-eastward to the government of Penza, and has in the middle of it the famous Ukraine, or basin of the middle Dnieper. A rich black soil here covers the ground to the depth of 3 feet on an average, but in places to the depth of 20 feet and upwards; and wheat of the finest quality is the prevalent crop. In Poland and in the immediately adjacent governments, as also in the Baltic provinces west of St Petersburg, a large surplus of grain is also produced, thanks, however, as much to the industry of man as to fertility of soil. The meadows of the upper Volga and Don are luxuriant with natural grasses.

In respect of temperature, the climate of Russia is one of extremes throughout, north and south differing from one another not so much in the degree as in the duration of heat and cold at opposite seasons. The Neva at St Petersburg is closed by ice during the winter half year; so also sometimes is the Bay of Odessa, in the Black Sea. On the southern slope of the Crimea the summer is both long enough and hot enough to bring semi-tropical fruits—the olive, the orange, the fig, the almond, and the pomegranate—to perfection; in Lapland, the heat of its few nightless summer-days is so great that mosquitoes are there an intolerable pest. In respect of moisture, the gentle swell already described as the watershed between north and south divides Russia into a region of mists, and, according to the season, of rain or snow, looking towards the Baltic and the Arctic Ocean, and a dry region, which becomes farther south a region of frequent and sometimes long-continued drought, looking towards the Caspian and Black Seas.

The mineral wealth of Russia, like its agricultural wealth, is vast and various, but rather partially distributed. The middle Ural Mountains are richer in minerals than any other range in

Europe, the principal mines being of gold, platinum, copper, and iron. Iron is very widely diffused. occurring even in the lowest marshy grounds under the form of bog-iron ore. The mining and smelting of both iron and copper are most extensively carried on in Perm, which possesses four mountains of magnetic ironstone, and copper-workings comparatively easy. The coal underlying central and southern Russia could supply the whole world for centuries, it is supposed. The largest and richest coal district lies between the Dnieper and the Don, and chiefly in that part of it watered by the Donetz. The supply of salt, both in brine-pits and in mines, is deemed inexhaustible.

Sedulously encouraged by government, the manufactures of Russia are now considerable. Textile fabrics of all kinds are produced, especially cottons; also hardware of all kinds, Tula being, in respect of firearms, the Russian Birmingham; and in the manufacture of leather, including morocco leather, Russia is unsurpassed. The exports are chiefly raw produce, grain and timber, hemp and flax, hides, tallow, and wool; and the imports chiefly colonial produce and raw cotton. Most of the foreign trade is carried on with Germany and Great Britain. The great feature of the overland trade with Asia is the import of tea from China. Internal traffic is facilitated by a system of inland navigation so complete that all the seas into which Russian rivers flow communicate with one another by river and canal. Railways have been built for strategical as well as commercial uses, but they have not yet perceptibly diminished the importance of the great annual fairs, of which the most celebrated is that of Nijni-Novgorod.

Russians by descent and Poles are of the Slavonian race. Swedes are numerous on the shores of Finland; Germans constitute the better classes in the Baltic provinces, St Petersburg excepted, and have a university of their own at Dorpat, Livonia; Greeks are dispersed over all the southern provinces as merchants; and Jews are numerous in Poland and the immediately adjoining governments, where, indeed, they often form the major part of the urban population. Besides these races, which all belong to the Aryan stock, the population of Russia contains several races of the Mongolian stock, viz., the Finns, including the Laplanders; various tribes related to the Finns, some inhabiting the western slopes of the Ural Mountains, others the banks of the middle Volga; the Tartars, found on both sides of the Ural Mountains, in Kazan and in the Crimea; and the tented Kalmucks, roaming over the south-eastern *steppes* with herds of camels, horses, and sheep. A mixture of Russians, Poles, and Turks has resulted in the tribe of Don Cossacks, who, after living for 500 years by hunting and plunder, submitted to the Russians in the 17th century. To four-fifths of this varied population Russian is the vernacular, and next to Russian in importance comes another Slavonian language, Polish. The established religion is Christianity according to the Eastern rite,

and the Emperor, or Czar, as he is called, is head of the church as well as of the state; but all religious denominations are tolerated, and the established church makes room within itself for various *Raskolniki*, a term which may be translated "Dissenters." The government is an absolute hereditary monarchy; and however loyal the masses are, bitter and inveterate must be the discontent of the so-called *Nihilists*, who, after assassinating many officials, compassed at length, in 1881, the death of the emperor himself. The imperial system has not resulted in complete uniformity of administration. Different codes prevail, and the native institutions of Finland, which was acquired from Sweden in 1809, and of Poland, which was handed over to Russia by the Congress of Vienna in 1815, have been partly respected. In virtue of a separate school organization, elementary instruction, rare elsewhere, is universal in Finland. The higher instruction, crowned by eight universities, is fairly well organized, because the classes requiring it have long been able to assert themselves; but, down to March 1861, the peasantry, who constitute the great body of the people, were serfs of the proprietors on whose lands they were born.

The capital of Russia in Europe and of the Russian Empire is St Petersburg, founded in 1703 by Peter the Great, on the Neva, where that river divides into the three channels by which it discharges into the Gulf of Finland. Built on a low, flat, and marshy site, which is liable to periodic inundations, and is so unhealthy that the number of deaths in the city exceeds by many thousands annually the number of births, St Petersburg challenges admiration in respect of its massive granite quays, its spacious, straight streets, and its magnificent public buildings, especially its palaces, and its churches with gilded domes. The Nevskoi Prospect, a street about three miles long, is of world-wide reputation as the principal thoroughfare. The imperial library is one of the most valuable in existence, having been enriched by the plunder of the Polish libraries. The river-islands below the city are covered with the mansions and gardens of the wealthy, being connected with one another and with the opposite banks, by bridges of boats in summer, and by ice during five to seven months of winter.

The Russian Empire, nearly as large in area as the British, is as remarkable for the continuousness as the British Empire is for the dispersion of its parts. It comprises above one-half of Europe and nearly one-third of Asia, altogether about one-sixth of the dry land of the globe. Small as its population is in relation to its extent, the population of the Russian Empire is yet inferior only to that of the Chinese and British empires. In both Europe and Asia the population is very unequally distributed. In Europe, it is thin towards the northern and south-eastern extremities, and rather dense in the middle, where an industrial belt crosses the country from west to east. In Asia, it is thin throughout, but about five times thinner in Siberia than in Central Asia. The particulars of the Russian Empire are:—

	Area in Square Miles.	Population.
In EUROPE—		
Russia proper,	2,000,000	66,000,000
Poland,	47,000	6,500,000
Finland,	140,000	2,000,000
Caucasus,	8,000	5,400,000
In ASIA—		
Siberia,	4,825,000	3,500,000
Central Asia,	1,305,000	4,500,000
	8,325,000	87,900,000

EXERCISES.

How is European Russia bounded? What is its extent in square miles? What is its population? Name the four constituent parts of European Russia. How many governments are there in Russia proper? Which two of them are partly in Asia? On what principle are most of the governments named? Name the governments of Great Russia. Name those of Little Russia. Name those of South Russia. Name those of East Russia. Name those of West Russia. Name the Baltic provinces. How many governments are not named after their administrative centres? Of what governments are Petrozavodsk, Simferopol, Novo-Tcherkask, Kichinev, Kaminietz, Jitomir, Revel, Riga, and Mitau the capitals respectively? What islands belong to Russia? Name its mountains. What are its principal lakes? Name its chief rivers. Trace the Volga, the Dnieper, the Petchora, the Dwina, etc.

Between what degrees of latitude and longitude is European Russia situated? What are its length and breadth? Trace the watershed whence waters flow northwards and southwards. Of what nature is this watershed? Describe the hills in which it culminates. In what two parts of Russia proper are there mountains? Describe the Caucasus. Name its highest summit, and compare that summit with Mont Blanc. Describe the two rivers which flow from the highest summit of the Caucasus.

Where and what are *tundras?* Where and what are *steppes?* What is the northern limit of the Caspian depression? What kind of marshes occur there? How far is the surface of the Caspian lower than that of the Black Sea? What is the southern limit of the forest region? Which government is almost wholly forest-clad. What do the forests yield besides timber? Trace the fertile belt. Where is the Ukraine? Describe its soil. In what other districts is a surplus of grain due as much to the industry of man as to fertility of soil? Where are there luxuriant meadows?

What is the general character of the Russian climate in respect of temperature? Mention facts showing that the extremes of heat and cold at opposite seasons are nearly the same in the far north and in the far south. If so, wherein lies the difference between the northern and the southern summer, the northern and the southern winter? Mention five semi-tropical fruits that ripen on the southern slope of the Crimea. Why could these fruits not ripen in Lapland, even were the temperature of the Lapland summer as high as that of the Crimean summer? What

divides the region of mists, and rain or snow, from the droughty regions?

In what respect does the mineral wealth of Russia resemble its agricultural wealth? Where is the richest mineral region? Name four metals mined in the Ural Mountains. In what government are both iron and copper works most extensive? Where is the most important coal district situated? What of the salt-supply?

In the manufacture of what textile fabric has the most marked progress been made? What town may be called the Russian Birmingham? In the manufacture of what article is Russia unsurpassed? What are the chief exports and imports? With what two countries is most of the foreign trade carried on? What is the great feature of the overland trade with Asia? Mention a fact which implies a very extensive system of inland navigation. What town is the seat of the largest annual fair? What two purposes have the Russian railways been built to serve?

To what race do Russians by descent and Poles belong? Where do Swedes, Germans, Greeks, and Jews respectively abound? To what stock do all these races belong? Mention three races of the Mongolian stock settled in Russia. How do the Kalmucks live? Tell the origin and history of the Don Cossacks. What is the established religion? How far is toleration carried? Of what nature is the government? How have the Nihilists shown their discontent? In which two of the constituent parts of European Russia have native institutions been partly respected? In which one of these two is elementary instruction universal? What fact accounts for the low state of elementary instruction in most parts of Russia? How many universities are there? Which one of them is German, and why?

Where, when, and by whom was St Petersburg founded? What are the disadvantages of the site? In what respects is St Petersburg imposing? Give the name and length of the principal thoroughfare. How has the imperial library been enriched? How are the river-islands below the city occupied? For how many months is the Neva frozen over in winter?

Compare and contrast the Russian Empire with the British. What proportion does it contain of the land in Europe, in Asia, and on the globe? What two empires surpass it in population? How is the population distributed in European and Asiatic Russia respectively?

DESCRIPTIVE TABLE.

Ab'o, a seaport of Finland, on the promontory formed by the Gulfs of Bothnia and Finland. Pop. 22,967.—60° 27′ N. lat. 22° 17′ E. long.

A'kerman (the white castle), a strongly fortified seaport of Bessarabia, near the junction of the Dniester with the Black Sea. Pop. 30,000.—46, 9 N. 30, 21 E.

Aland, *o'land* (land of waters), the principal island of a group at the entrance of the Gulf of Bothnia, 18 miles long and 14 broad. It was captured in 1854 by the British and French, who destroyed the fortifications at Bomarsund. Pop. 10,000.

Al'ma, a river in the Crimea, famous for the victory over the Russians, gained upon its banks, by the Anglo-French army, in September 1854.

Anapa', a maritime fortress on the Circassian shore of the Black Sea about 50 miles S.E. from Enikalè. It was dismantled and evacuated by the Russians* on the approach of the Anglo-French fleet in June 1855. Pop. 5037.

Arabat', a fortress on the northern

shore of the Crimea. It gives name to a bay in the Sea of Azov, and to the remarkable strip or tongue of land which divides the Sea of Azov from the Siwash or Putrid Sea.

Archangel, *ark-ain'jel*, Russ. pron. *ark-ång'ghel*, a government in the N., including Novaia Zemlia. It has extensive fisheries. It contains 336,934 square miles; pop. 307,231.

Archangel, the capital of the government of the same name, and the principal commercial city in the N. of Russia, about 40 miles from the junction of the Northern Dwina with the White Sea. Pop. 19,540.—64, 32 N. 40, 44 E.

Astracan', or **Astrakhan'**, a government in the S.E., lying along the shores of the Caspian Sea. The soil, except on the banks of the Volga, is barren. Extent, 83,997 square miles; pop. 688,719.

Astracan', the capital of the government of the same name, stands on an island in the Volga, about 50 miles from the mouth of that stream. It has considerable trade, and large fisheries on the Volga and Caspian. Pop. 57,704.—46, 18 N. 48, 5 E.

Az'ov, Sea of, the *Palus Mæotis* of the ancients; it communicates with the Black Sea by the Straits of Enikalè or Kertch, the ancient *Cimmerian Bosporus*.

Balakla'va (beautiful quay), a harbour near the southern extremity of the Crimea. In September 1854 it was seized by the British, who afterwards made a railway from it to their camp before Sebastopol. Near it was fought a battle in October 1854, in which 600 British light cavalry charged a Russian army. Pop. 695.

Ben'der (market or harbour), formerly a strongly fortified town in Bessarabia, on the Dniester. Pop. 26,842.

Berdiansk', or **Berdian'ski**, a town with a good harbour, at the mouth of the river Berda, on the northern shore of the sea of Azov. Pop. 20,849.

Berditchev, *ber-de-chef'*, a town in the government of Kiev, with considerable trade. Pop. 52,563.

Bessara'bia, a province between the Pruth and the Dniester, ceded by Turkey in 1812. It contains 17,020 square miles; pop. 1,314,191.

Bog, or **Bug**, *boog*, a river which issues from a lake in the N. of Podolia, flows through that government and Kherson, and falls into the estuary of the Dnieper.

Borodino, *bor-o-de'no*, a village in the government of Moscow, near the river Moskva, memorable for a desperate battle fought here, on 7th September 1812, between the Russians and French, when about 30,000 fell on each side.

Cauca'sia, or the Cau'casus, including Circassia, a lieutenancy extending from the Sea of Azov and the Black Sea to the W. shore of the Sea of Aral, comprising an extensive region on the northern or European side of the Caucasus, as well as Batoum and Kars in Armenia, and also the desert country to the E. of the Caspian, known as the Transcaspian District. The mountaineers of the Caucasus, especially the Circassians, are remarkable for their elegance of person; the beauty of the Circassian women has long been proverbial in the east. Extent, 308,037 sq. m.; pop. 6,290,539.

Cau'casus (mountain on mountain, or the white mountain), a chain of lofty mountains stretching across the isthmus between the Black Sea and the Caspian. Its length, from Anapa on the Black Sea to Baku on the Caspian, is about 700 miles; its breadth varies from 60 to 120 miles. Its loftiest summit, Elburz, is 18,493 feet above the sea.

Choczim, *ko'chim*, or **Khotin**, *ko-teen'*, a strongly fortified town in Bessarabia, on the Dniester; it was ceded by the Turks in 1812. Pop. 15,782.—48, 28 N. 26, 30 E.

Circassia, *sir-kash'e-a* (the land of the Tcherkes), a region of Caucasia, bordering on the Black Sea, inhabited by warlike tribes, who long resisted the arms of Russia.

Cour'land, a government in the N.W., separated from Livonia by the Southern Dwina. It is fertile, but ill cultivated. Area, 10,365 square miles; pop. 681,930.

Crime'a, or **Crim Tartary**, the *Chersone'sus Taurica* of the ancients, a peninsula in the S. of Taurida, washed by the Black Sea and the Sea of Azov, and joined to the mainland by the Isthmus of Perekop. It is divided by the river Salgir into two parts, the northern and larger being barren and thinly peopled, the southern being traversed by a range of mountains enclosing beautiful valleys, rich in all the productions of the south. It forms a large part of the government of *Taurida*. Pop. of government, 878,925.

Cron'stadt, a seaport and strong

fortress in the government of St Petersburg, at the S.E. extremity of a small island in the Gulf of Finland. It commands the passage of St Petersburg, from which it is distant 20 miles, and is the principal station of the Russian navy. It was founded by Peter the Great, who employed 300,000 men in the work. Pop. 48,276.—59, 59 N. 29, 46 E.

Daghestan′ (mountain land), a province on the W. of the Caspian Sea, for many years a debatable land between the Persians and Russians, but now possessed by the latter. Pop. 481,524.

Da′go, an island at the entrance of the Gulf of Finland, with a lighthouse near Dagerort, its chief village. Pop. 10,000.—58, 55 N. 22, 12 E.

Dariel, *dä-re-el′* (the Caspian Gates), a Russian fortress, in a narrow defile of the Caucasus, on the Terek, 80 miles N. of Tiflis.

Derbend′, a strongly fortified seaport of Daghestan, in the lieutenancy of the Caucasus, on the W. coast of the Caspian Sea. Pop. 16,552.

Dnieper, *nee′per*, the ancient *Borysthenes*, a large river which rises in the government of Smolensk, and, after a winding course, falls into the Black Sea below Kherson.

Dniester, *nees′ter*, the ancient *Tyras*, a large river which has its source in the Carpathian Mountains in Austrian Galicia, enters Russia at Choczim in Bessarabia, and falls into the Black Sea near Akerman.

Don, the *Tanais* of the ancients, a large river which rises in the government of Tula, and, after a winding course, empties itself by several channels into the Sea of Azov.

Don Cos′sacks, a tribe whose territory extends along the lower course of the Don. It contains 61,942 square miles; pop. 1,367,486. The greater part of the male inhabitants are cavalry soldiers, possessing their lands as the price of their service.

Dor′pat, a town of Livonia, with a university (the oldest in Russia), founded in 1632, and in which the German language is used. Pop. 29,727.

Dwi′na, Southern, a river which issues from the Valdai Hills, and flows into the Gulf of Riga. It is navigable through nearly its whole course, and communicates with Lake Ladoga and St Petersburg by a canal.

Dwi′na, Northern, a large river, formed by the junction of the Soukhona and the Joug, in the government of Vologda; it falls by several channels into the White Sea, below Archangel.

Ekaterinoslav, *yä-kä-tä-ren-o-slav′*, government N. of Taurida, containing 25,335 square miles; pop. 1,532,045.

Ekaterinoslav, the capital of the above government, on the Dnieper, with considerable woollen manufactures. Pop. 33,973.

Enara, *ä-nä′rä*, a lake in Russian Lapland, containing numerous islets.

Enikalé, Strait of, *en-e-kä′lä*, connecting the Black Sea and the Sea of Azov. *See* **Kertch**.

Esthonia, *es-tho′ne-ä*, a government extending along the S. shore of the Gulf of Finland. It contains 7817 square miles. Pop. 353,108.

Eupato′ria, formerly called **Koslov**, seaport on the western shore of the Crimea. In the Bay of Kalamita, which lies to the south of it, the Anglo-French army landed in September 1854. The town was afterwards fortified and occupied by the Turks, who repulsed an attack upon it by the Russians in February 1855. Pop. 8294.

Fin′land, an extensive country E. of Sweden, to which it belonged till the year 1809, when it was seized by the Russians. It is divided into eight governments, and contains 143,899 square miles. Pop. 2,060,782.

Fin′land, Gulf of, an arm of the Baltic extending to St Petersburg.

Franz Jos′eph Land, islands in the Arctic Ocean, N.E. of Spitzbergen, the most northern land yet discovered in the Eastern Hemisphere.

Genit′chi, a small seaport, on the narrow strait of the same name which connects the Siwash or Putrid Sea with the Sea of Azov.

Georgievsk, *gä-or-ghe-evsk′*, a fortified town in the government of Stavropol, on a tributary of the Kouma. Pop. 4167.

Grod′no, a government in W. Russia, containing 14,528 square miles, and 1,165,401 inhabitants.

Grod′no, the capital of the above government, on the Niemen. Here Stanislaus, king of Poland, sought his last retreat, and finally abdicated his crown in 1797. Pop. 34,755.

Han′go and Hango Head, a harbour and promontory on the north of the Gulf of Finland. Here a British boat's crew, under a flag of truce, were killed or taken prisoners by the Russians in June 1855.

Hel′singfors, a seaport and strong

fortress, the capital of Finland, on the Gulf of Finland. Pop. 43,142.—60, 11 N. 25, 0 E.

Ilmen′, a lake in the government of Novgorod. It is of a triangular form, and communicates with Lake Ladoga by the river Volkov and a canal.

Ink′ermann (the town of caverns), a ruined town near the eastern termination of the harbour of Sebastopol It gave name to an obstinate and bloody conflict between the Anglo-French and Russian armies on the 5th November 1854, when the Russians were beaten back with great loss.

Ismail, *is-mä-eel′*, a strongly fortified town on the Kilia, the principal arm of the Danube, about 40 miles from the Black Sea. It was taken by the Russians under Suwarrow in 1790, restored to Turkey, by the Treaty of Paris, in 1856, and given back to Russia by the Berlin Treaty of 1878. Pop. 16,329.

Jaroslav, *yä-ro-släv′*, capital of government of same name, is the see of an archbishop, and has manufactures of silk, linen, and leather. Pop. 30,275.

Jitomir′, or **Zhitomeer**, *zhit-o-meer′*, the capital of Volhynia, on the Teterev. Pop. 41,790.

Kaf′fa, or **Feodo′sia**, a seaport on the E. coast of the Crimea. Pop. 8482.

Kalami′ta Bay, a large inlet on the western shore of the Crimea, memorable as the landing-place of the Anglo-French army which invaded the Crimea in September 1854.

Ka′lisch, a manufacturing city in Poland, on the Prosna. Pop. 20,280.

Kalu′ga, a government bounded by Moscow, Smolensk, Orel, and Tula. It has considerable trade and manufactures. Extent, 12,068 square miles. Pop. 1,098,814.

Kalu′ga, the capital of the above government, on the Oka. Pop. 38,608.

Ka′ma, a river which rises in Viatka, traverses Perm, and joins the Volga 24 miles below Kazan.

Kamieniec, or **Kaminietz**, *käm-yen′yets* (the stony place), the capital of the government of Podolia, near the Dniester. Pop. 22,611.

Kandalask′, a gulf of the White Sea stretching into Russian Lapland.

Kazan′, a government to the S. of Viatka, inhabited by people who are chiefly of Tartar origin. Extent, 23,465 square miles. Pop. 1,872,437.

Kazan′, the capital of the above government, on the Kazanka, near its junction with the Volga. It is the see of an archbishop, and the seat of a university founded in 1804. It has an extensive trade. Pop. 94,170.

Kertch, a seaport of the Crimea, on the Strait of Enikalè, or, as it is frequently called, the Strait of Kertch. It was captured by the British and French allies in May 1855. Pop. 22,449.

Kharkov′, **Charkov′**, or the **U′kraine**, a government S. of Kursk and E. of Poltava. It contains 20,731 square miles. Pop. 2,027,165.

Kharkov′, the capital of the above government, on the small rivers Kharkov and Lapan. Its monastic college was, in 1803, erected into a university. Pop. 101,175.

Kherson′, or **Cherson′**, a government in the S., on the Black Sea, between the Dnieper and the Dniester. It contains 28,363 square miles. Pop. 1,765,302.

Kherson′, the capital of the above government, on the right bank and near the mouth of the Dnieper. The philanthropic Howard died here in 1790, and is buried about four miles from the town, where a monument has been erected to his memory. Pop. 128,079.—46, 38 N. 32, 38 E.

Kichinev, or **Kishenev**, *kish-e-nev′*, the capital of the province of Bessarabia. Pop. 112,137.

Kiev, or **Kiew**, *ke-ev′*, a government on the Dnieper. Its soil is fertile. Extent, 19,280 square miles. Pop. 2,530,204.

Kiev′, the capital of the above government, on the right bank of the Dnieper. It is the see of an archbishop and the seat of a university founded in 1833. Pop. 127,251.—50, 27 N. 30, 27 E.

Kolguev′, a dreary and thinly inhabited island in the Northern Ocean.

Kostro′ma, a government surrounded by Vologda, Viatka, Nijni-Novgorod, Vladimir, and Jaroslav. Extent, 30,508 square miles. Pop. 1,251,718.

Kostro′ma, the capital of the above government, on the Volga, near its junction with the Kostroma. Pop. 30,405.

Kov′no, a government near the Baltic, having Courland on the north, and the river Niemen on the south. It contains 15,937 square miles, and has a population of 1,408,079. The capital is Kovno. Pop. 42,227.

Kuban, or **Kouban**, *koo-ban′*, a river which has its source in the Caucasus, and, flowing westwards, divides into

two branches, forming the island of Taman between the Sea of Azov and the Black Sea. The Russians regard the Kuban, on the west, and the Terek, on the east, as the boundary between Europe and Asia.

Kursk, or Coursk, *koorsk,* a government bounded by Orel, Voronetz, Kharkov, and Tchernigov. It contains 17,220 square miles. Pop. 2,239,397.

Kursk, the capital of the above government, near the Seim; it is one of the most ancient towns in the empire. Pop. 31,754.

Lad'oga, Lake, surrounded by the governments of St Petersburg, Olonetz, and Viborg, is the largest lake in Europe, being 120 miles long and 70 broad. It is connected by canals with Lake Ilmen and the Volga, so as to allow of passage by water from the Baltic to the Caspian.

Libau, *le-bou',* a seaport in Courland. Pop. 10,767.—56, 31 N. 20, 56 E.

Livo'nia, a maritime government, having Esthonia on the N. and Courland on the S. It exports a considerable quantity of corn. Extent, 17,472 square miles. Pop. 1,117,074.

Lovi'sa, a small town on the northern shore of the Gulf of Finland. Its harbour was defended by a strong fortress, which was blown up by the British fleet in July 1855, when the town was accidentally burned.

Lublin, *loob'lin,* a town in Poland, with considerable trade. It is the capital of a government of the same name. Pop. 33,000.

Mario'pol, or Mariou'pol, a maritime town at the mouth of the Kalmius, on the N. shore of the Sea of Azov. Pop. 9774.

Minsk, a government, extending from the Dwina on the N. to Volhynia on the S. It is a level district, with immense forests. Extent, 34,083 square miles. Pop. 1,451,938.

Minsk, the capital of the above government, and the see of an archbishop, on the Swistocz. Pop. 43,995.

Mitau, *me'tou,* or **Mittau,** *mit'tou,* the capital of the government of Courland, near the Gulf of Riga. Pop. 23,847.

Mohilev, or Moghilev, *mo-he'lev,* a fertile government to the E. of Minsk. Extent, 18,586 square miles. Pop. 1,092,163.

Mohi'lev, the capital of the above government, on the Dnieper. It has an extensive trade, and is the seat of a Greek and of a Roman Catholic archbishop. Pop. 41,716.—53, 50 N. 30, 24 E.

Moscow, *mos'ko* (*Russ.* **Moskwa**), a central government, among the least extensive but most populous provinces in the empire. Its trade and manufactures are very considerable. It contains 12,405 square miles. Pop. 1,938,358.

Moscow, a former capital of the empire, the principal emporium of its internal commerce, and the seat of a university founded in 1759. It stands on the navigable river Moskwa. Almost the whole city was reduced to ashes by its inhabitants, when it was occupied by the French army in September 1812. It has been since rebuilt, and in some parts with increased splendour. The most remarkable of the hills on which the city is built is the Kremlin, enclosed by a wall two miles in circuit, which contains the ancient palace of the czars, and many other buildings of a public character, mostly in the Tartar style of architecture. Pop. 611,974.—55, 45 N. 37, 33 E.

Nar'va, a town in the government of St Petersburg. Here the Swedes under Charles XII. defeated the Russians in 1700. Pop. 6482.

Ne'va, Russ. pron. *nā-vá',* a river which issues from Lake Ladoga, and, after a course of 35 miles, empties itself by three mouths into the Gulf of Finland.

Niemen. *See* Descriptive Table of the GERMAN EMPIRE, page 234.

Nijni-Novgorod, *nish'ne-nov'go-rod,* a central government, E. of Vladimir, containing 19,406 square miles. Pop. 1,369,369.

Nijni-Novgorod (the lower new town), the capital of the above government, at the confluence of the Oka with the Volga. It is a place of great internal trade, and is famed for its yearly fair, one of the largest in Europe. Pop. 42,441.

Nikolaiev', a seaport of Kherson, on the Bog. Pop. 82,805.

No'vai Zem'lia (new land), two large islands in the Arctic Ocean, separated from the mainland by Waigatz Island and Strait.

Nov'gorod, a government to the E. of St Petersburg. Extent, 45,940 square miles. Pop. 1,078,955.

Nov'gorod, the capital of the above government, once the most flourishing city in the N. of Europe, in a beautiful plain at the N. extremity of Lake Ilmen. Pop. 17,579.

Odes'sa, a thriving city and seaport in the government of Kherson, on the Black Sea, between the rivers Dniester and Bog. It has a great export trade, especially in corn. Pop. 193,513.—46, 29 N. 30, 43 E.

Oesel, *u'sel* or *e'sel* (seal island), an island at the mouth of the Gulf of Riga. Pop. 46,000.

O'ka, a river which rises in the government of Orel, and falls into the Volga at Nijni-Novgorod.

Olonetz', a government south of Archangel, containing 56,896 square miles. Pop. 314,438.

Olonetz', a town in the above government, near Lake Ladoga; here Peter the Great constructed his first dockyard. Pop. 1341.

One'ga, Russ. pron. *e-nā'gā*, a lake in Olonetz, 150 miles long, and from 30 to 59 broad. It is connected by the river Swir with Lake Ladoga.

One'ga, a river which rises in the S.E. of Olonetz, and flows north-westward into the Gulf of Onega.

Orel', a government in the interior, S. of Tula and Kaluga. Extent, 18,061 square miles. Pop. 1,826,169.

Orel', the capital of the above government, on the Oka, with considerable trade. Pop. 53,505.

Orenburg, *o'ren-boorg*, a government in the S.E., between Oufa and Astracan, extending across the Ural Mountains into Asiatic Russia. Extent, about 45,000 square miles. Pop. 1,070,420.

O'renburg, a fortified city, capital of the above government, on the Ural. Pop. 47,840.—51, 45 N. 55, 6 E.

Oufa, or **Ufa**, *oo'fā*, a government in the S.E., between Perm and Orenburg. Extent, about 53,500 square miles. Pop. 1,648,754.

Ou'fa, the capital of the above government, at the junction of the Oufa and Bielaia. Pop. 20,917.

Peipus, Lake, *pā'e-pooce*, surrounded by the governments of St Petersburg and Livonia. It is 50 miles long and 35 broad, and communicates with the Gulf of Finland by the river Narva.

Pen'za, a government in the E. having Nijni-Novgorod on the N. and Saratov on the S. It contains 14,465 square miles. Pop. 1,332,598.

Pen'za, capital of the above government, near the Sura. Pop. 35,026.

Perekop, *pā-rā-kop'* (the rampart, or the gate of the headland or isthmus), a small town in the Taurida, on the isthmus connecting the Crimea with the continent. Pop. 4331.

Perm, a government stretching across the Ural Mountains into Asiatic Russia, containing 128,640 square miles. Pop. 2,439,134.

Perm, the capital of the above government, and the seat of an archbishop, on the Kama. Pop 22,288.

Pernau, *per-nou'* (the lime-tree fort), a seaport of Livonia, on the Gulf of Riga. Pop. 12,918.—58, 22 N. 24, 32 E.

Petchora, *petsh-o'rā*, a large river which rises in the Ural Mountains, and falls into the Arctic Ocean.

Petersburg, St, *pe'terz-boorg*, a government at the eastern extremity of the Gulf of Finland, containing 20,759 square miles. Pop. 1,591,244.

Petersburg, St, the capital of the above government, and the metropolis of the empire. Pop. 876,575.—59, 56 N. 30, 19 E. *See* REMARKS, page 209.

Petrozavodsk', the capital of the government of Olonetz, on Lake Onega; it has great iron-works. Pop. 10,901.

Podo'lia, a fertile government in W. Russia, to the N. of Bessarabia, containing 16,190 square miles. Pop. 2,169,423.

Po'land (the level land), a large and fertile country between Russia and Germany. It was long an independent kingdom, but in 1772 Russia, Austria, and Prussia partitioned part of its territory; in 1793 a second, and in 1795 a third and final division was made. The present kingdom of Poland originated in the grand-duchy of Warsaw, formed by Napoleon I. in 1807, and assigned by the Congress of Vienna, in 1815, to the Emperor Alexander I., who erected it into a kingdom, with a representative constitution. After the unfortunate attempt of the Poles to regain their national independence in 1830, the constitution was suppressed. The kingdom is now incorporated with the Russian Empire. Extent, 49,194 square miles. Pop. 7,104,760.

Polta'va, or **Pultow'a**, a government between Kiev and Kharkov, containing 18,775 square miles. Pop. 2,399,004.

Polta'va, or **Pultow'a**, the capital of the above government; here, in 1709, Charles XII. of Sweden was totally defeated by the Russians. Pop. 33,979.

Pskov, a government in the N.W., between Livonia and Smolensk. Extent, 16,841 square miles. Pop. 883,604.

Pskov, or **Ples'kov**, the capital of

the above government, at the confluence of the Velikaja and Pskov. Pop. 19,267.

Putrid Sea, or **Si'wash**, an irregular and shallow expanse of water on the northern shore of the Crimea, communicating by the Strait of Genitchi with the Sea of Azov, from which it is separated by the narrow strip of land called the "Tongue of Arabat."

Rev'el, the capital of the government of Esthonia, on a bay of the Gulf of Finland. It is a place of considerable trade, with an excellent harbour, and is strongly fortified. Pop. 50,859.—59, 26 N. 24, 44 E.

Riazan, *re-â-zân'*, a government east of Moscow, traversed by the river Oka, and containing 16,022 square miles. Pop. 1,653,263.

Riazan', the capital of the above government, on the Oka, the see of an archbishop, and remarkable for its numerous churches. Pop. 19,990.

Riga, *re'gâ*, an important city, the capital of the government of Livonia, on the Southern Dwina, seven miles from the sea. In point of trade Riga ranks next to St Petersburg. The chief exports are flax and hemp, corn, timber, and tallow. Pop. 168,844.—56, 57 N. 24, 6 E.

Riga, Gulf of, an arm of the Baltic, between Courland and Livonia.

Rostov', a town on the Don, between Azov and Tcherkask, in the government of Ekaterinoslav. In its neighbourhood coal-mines have been opened and iron ore discovered. Pop. 44,453.

Sama'ra, a government on the Volga, with a town of the same name; it was formed, in 1850, out of portions of the provinces of Simbirsk, Saratov, and Orenbourg, and contains 60,159 square miles. Pop. 2,143,490. Pop. of town, 51,947.

Saratov', a government in the S.E. Great part of it is barren, being impregnated with salt, and it contains a number of salt lakes. Extent, 31,244 square miles. Pop. 1,988,328.

Saratov', the capital of the above government, on the Volga; it has an active trade, chiefly with Moscow and Astracan. Pop. 86,418.

Sebas'topol, or **Sevasto'pol** (the august or most sacred city), a seaport in the S.W. of the Crimea, famous for its siege by the British and French in 1854 and 1855, when the south side of the town, including the arsenal and docks, was taken and destroyed. Pop. 13,259.

Simbirsk, *sim-beersk'*, a government, between Kazan and Saratov, traversed by the Volga. It contains 19,109 square miles. Pop. 1,409,727.

Simbirsk', the capital of the above government, beautifully situated on the Volga. Pop. 26,822.

Simfero'pol (the white mosque), the capital of Taurida, a handsome town of the Crimea. Pop. 52,585.—44, 58 N. 34, 3 E.

Smolensk', a government W. of Moscow, containing 21,637 square miles, and 1,223,863 inhabitants.

Smolensk', an ancient walled city, the capital of the above government, on the Dnieper. Here, in 1812, the first important stand against the French was made by the Russians, who burned the town previously to their evacuating it. Its trade and manufactures are considerable. Pop. 24,332. 54, 48 N. 31, 58 E.

Spitzber'gen (the peaked mountains), a group of desolate islands in the Arctic Ocean, extending from 70° to 81° N. lat.

Stavro'pol, a government between the Caucasus on the south and Astracan and the country of the Don Cossacks on the north. It was regarded for administrative purposes as in Asiatic Russia (in the lieutenancy of Caucasia). It contains 26,672 square miles; pop. 475,051. Its chief town after the capital is Georgievesk (pop. 4167).

Stavro'pol (the city of the cross), the capital of the above government, on the Tachla. Pop. 34,328.

Sweaborg, or **Sveaborg**, *svā'â-borg*, a seaport and strong fortress in Finland; it was bombarded and greatly damaged by the Anglo-French fleet in August 1855. Pop. 6200.

Taganrog', a fortified seaport on the N. shore of the Sea of Azov; its public buildings were destroyed by the Anglo-French fleet in June 1855. Pop. 48,186. —47, 12 N. 38, 42 E.

Taman', an island between the Black Sea and the Sea of Azov, formed by the two branches of the river Kuban.

Tambov', a government west of Penza and Saratov, containing 25,706 square miles; pop. 2,405,713.

Tambov', capital of the above government, and the see of a Greek bishop; it has considerable trade. Pop. 26,403.

Taurida, *tou're-dâ*, a government in the S., comprehending the Crimea and a considerable tract on the mainland

N. and N.E. of that peninsula. Extent, 24,538 square miles; pop. 878,925.

Tcherkask', No'vo, the capital of the Don Cossacks, on the Aksai, a branch of the Don; it is surrounded by water and marshes. Pop. 37,091.

Tchernigov', a fertile government N. of Poltava and E. of the Dnieper, containing 20,232 square miles; pop. 1,850,522.

Tchernigov', the capital of the above government, on the Desna; it is the see of an archbishop. Pop. 25,926.—51, 30 N. 31, 20 E.

Terek, *tā-rek',* a river which rises in Mount Elburz, the highest peak of the Caucasus range, and flowing eastward enters the Caspian Sea. The Russians regard it as the boundary at this point between Europe and Asia.—Also a government of Caucasia. Area 23,267 square miles; pop. 626,430.

Tula, *too'lä,* a government S. of Moscow, containing 11,957 square miles; pop. 1,279,715.

Tula, the capital of the above government, at the confluence of the Tulitza and Oupa, may be called the Birmingham of Russia. It has a cannon-foundry and extensive manufactures of arms, hardware, and cutlery. Pop. 57,374.—54, 11 N. 37, 20 E.

Tver, or **Twer,** *twār,* a government between Moscow and Novgorod, covered with forests. It contains 25,736 square miles; pop. 1,638,196.

Tver, or **Twer,** the capital of the above government; it is a handsome city, on the road from St Petersburg to Moscow, at the confluence of the Tvertza and the Volga. Pop. 38,246.

Ukraine, *u'krān* or *oo-krān'* (a frontier or boundary), an old subdivision, comprising the country now included in the governments Kiev, Poltava, and Kharkov, and called Little Russia.

Uleaborg, *oo'le-o-borg* (town on the Ulea), a seaport of Finland, near the head of the Gulf of Bothnia. Pop. 9705.

U'ral Mountains, an extensive range which forms the boundary between European and Asiatic Russia. Several of the peaks rise to between 8000 and 9000 feet above the sea.

U'ral, a river which has its source in the above mountains, divides Europe from Asia, and flows into the Caspian Sea, after a course of 1040 miles.

Valdai Hills, *vāl'di,* a range in the government of Novgorod and Tver, rising to the height of 1200 feet.

Va'sa, or **Wa'sa,** a seaport of Finland, on the Gulf of Bothnia. Pop. 3900.

Viatka, or **Wjatka,** *ve-ät'kä,* a government in the E., between Kostroma and Perm, containing 59,114 square miles; pop. 2,620,000.

Viatka, the capital of the above government, at the confluence of the Viatka and Chlinooka. Pop. 21,694.

Viborg, or **Wyborg,** *ve'borg* (holy town), a fortress and seaport on the Gulf of Finland. Pop. 14,688.—60, 42 N. 28, 46 E.

Vis'tula. *See* Descriptive Table of the GERMAN EMPIRE, page 237.

Vitebsk', a government to the E. of Courland, containing 17,439 square miles; pop. 1,073,539.

Vitebsk', the capital of the above government, at the confluence of the Southern Dwina and Viteba. Pop. 40,401.

Vladimir, *vlä-de-meer',* a government to the E. of Moscow, containing 18,082 square miles; pop. 1,332,156.

Vladimir, the capital of the above government. Pop. 16,422.

Vol'ga, or **Wol'ga,** the largest river in Europe, rises among the Valdai Hills near the frontier of Novgorod, and flows eastward till it reaches the city of Kazan, below which it is joined by the Kama; it then takes a southerly direction, and, after separating into numerous branches, discharges its waters by seventy mouths into the Caspian. It is navigable through almost its whole course.

Volgsk, or **Volsk** (town on the Volga), a town in the government of Saratov, on the Volga, with large manufactures of arms. Pop. 31,269.

Volhy'nia, *vol-hin'e-ä* (the plain), a fertile government in W. Russia, between Grodno and Podolia. Extent, 27,039 square miles. Pop. 1,981,300.

Volog'da, an extensive government S. of Archangel, containing 151,384 square miles. Pop. 1,131,584.

Volog'da, the capital of the above government, on the Vologda; it has an active trade and a number of manufactures. Pop. 17,255.

Voronetz, *vo-ro-nets',* or **Voronej,** *vo-ro-nesh',* a government N.W. of the Don Cossacks, containing 25,441 square miles. Pop. 2,340,266.

Vo'ronetz, the capital of the above government, at the confluence of the Voronetz and the Don; it has considerable trade. Pop. 46,270.

Waigatz, an island in the Arctic

Ocean, to the S. of Novaia Zemlia, separated from the continent by a strait of the same name.

War'anger, a bay of the Arctic Ocean, between Swedish and Russian Lapland.

War'saw (the fortified place), the capital of Poland, finely situated on the Vistula. It suffered terribly in the sieges of 1794 and 1831. It has some handsome public buildings. Its university was suppressed in 1834. Pop. 339,341.—52, 13 N. 21, 0 E.

Wilna, or Vilna, *vil'nȧ*, a government on the Baltic, to the S. of Courland, containing 16,434 square miles. Pop. 1,171,400.

Wilna, the capital of the government of the same name. It is the see of a Greek and a Roman Catholic bishop, and until 1832 was the seat of a university. Pop. 88,693.—54, 41 N. 25, 17 E.

THE GERMAN EMPIRE

Is bounded N. by the German Ocean, Denmark, and the Baltic; W. by Holland, Belgium, and France; S. by Switzerland and Austria; E. by Austria and Russia. It contains about 212,000 square miles, and a population of 45,000,000.

The German Empire is composed of the following states:—

Kinds.	Names.	Population.	Capitals.
I. Four Kingdoms	1. Prussia	27,279,000	Berlin.
	2. Bavaria	5,285,000	Munich.
	3. Saxony	2,973,000	Dresden.
	4. Wurtemberg	1,971,000	Stuttgart.
II. Six Grand Duchies	5. Baden	1,570,000	Carlsruhe.
	6. Hesse	936,000	Darmstadt.
	7. Saxe-Weimar	310,000	Weimar.
	8. Mecklenburg-Schwerin	577,000	Schwerin.
	9. Mecklenburg-Strelitz	100,000	New Strelitz.
	10. Oldenburg	337,000	Oldenburg.
III. Five Duchies	11. Brunswick	349,000	Brunswick.
	12. Anhalt	233,000	Dessau.
	13. Saxe-Coburg-Gotha	195,000	Gotha and Coburg.
	14. Saxe-Altenburg	155,000	Altenburg.
	15. Saxe-Meiningen	207,000	Meiningen.
IV. Seven Principalities	16. Waldeck	57,000	Arolsen.
	17. Lippe-Detmold	120,000	Detmold.
	18. Schaumburg-Lippe	35,000	Bückeburg.
	19. Schwarzburg-Rudolstadt	80,000	Rudolstadt.
	20. Schwarzburg-Sondershausen	71,000	Sondershausen.
	21. Reuss-Greiz	50,000	Greiz.
	22. Reuss-Schleiz	101,000	Gera.
V. Three Free Towns	23. Hamburg	453,000	
	24. Lübeck	63,000	
	25. Bremen	157,000	
VI. Reichsland, *i.e.* Imperial Territory	26. Alsace-Lorraine	1,566,000	Strasburg. Colmar. Metz.

Islands.—Rugen, Usedom, Wollin, Femern, Alsen, North Frisian Isles.

Gulfs, etc.—Gulf of Dantzic, Frische Haff, Kurische Haff, Grosse Haff, Rügen Bay, Lübeck Bay, Kiel Bay.

Mountains.—Teutoburger Wald, Harz, Thüringerwald, Westerwald, Taunus, Odenwald, Black Forest.

Lakes.—Spirding and Mauer in E. Prussia; Muritz and Schwerin in Mecklenburg; Chiem, Ammer, and Würm in Bavaria.

Rivers.—Rhine, Ems, Weser, Elbe, Eider, Oder, Vistula, Pregel, Niemen or Memel.

REMARKS.

The German Empire extends from 47° 18′ to 55° 52′ N. lat., and from 5° 50′ to 22° 50′ E. long. Its greatest length from east to west is about 670 miles, and its breadth from north to south about 650 miles. All Germany is not included in the German Empire; witness the provinces of Austria which are German in respect of race, language, traditions, and sympathies: politically speaking, however, the German Empire is Germany.

The German Empire is naturally divided into north and south, into Lower Germany and Upper Germany, the division being made, about 51° N. lat., by a series of non-continuous and mostly forest-clad hills and highland districts, of which Westerwald and Thüringerwald are the most considerable. Thüringerwald may be regarded as an outlier of the mighty frontier ranges which separate the German Empire from Austria, viz., the Riesengebirge, the Erzgebirge, and Böhmerwald. Lower or Northern Germany belongs to the great European plain, the uniform level being broken in 52° N. lat., by Teutoburger Wald north of that parallel, and by the Harz Mountains south of it. With the trifling exceptions of the two Mecklenburgs, Oldenburg, the two Lippes, Brunswick, Anhalt, Waldeck, and the three Free Towns, Lower Germany is included within the kingdom of Prussia. It is an infertile region on the whole, swampy towards the north-west, sandy and watery towards the north-east, with many a barren heath in the interior. Rye is the prevalent grain; and rye-bread, almost black and generally sour, is the mainstay of the people. The richest wheat-lands are in the Prussian provinces bordering on Poland. The surface of Upper or Southern Germany is highly diversified. The kingdom of Saxony is an inclined plane sloping up to the Erzgebirge, and one part of it is worthily called Saxon Switzerland. The table-land of central Bavaria rises into mountainous regions towards Bohemia and Tyrol, and into a beautifully variegated country towards Würtemberg. The picturesque scenery of the

Rhine between Bonn and Mainz is world-famous; and though, higher up, its immediate banks are flat, the background on either side is mountainous, formed by the Black Forest on the eastern side and by the Vosges Mountains on the western. Such are the charms of the Black Forest, that, in respect of it, Baden has been called the Paradise of Germany. The abundance of mineral waters throughout Upper Germany, and the reputation of German baths, unite with the scenery to attract an annual crowd of tourists to the Rhine countries, the kingdom of Saxony, and the Bavarian Highlands, and induce many to prolong their stay at some favourite resort. Except the greater part of Bavaria, and corners of Würtemberg and Baden, which drain into the Black Sea by the Danube, the German Empire sends its drainage to the North Sea and the Baltic; so that the far greater part of Upper Germany, as well as the whole of Lower Germany, has a northward slope. The extremes of temperature at opposite seasons increase from west to east; but the average temperature is much the same throughout, because the more southerly position of Upper Germany is also more elevated. The moisture of the air diminishes from north to south. Rhenish Prussia is the most northerly wine-district in Europe; but the wines are acidulous, the heat not being sufficient to develop much saccharine matter in the grapes, which, indeed, require to be mellowed by a touch of frost. The vineyards extend up the Moselle, Maine, and Neckar, tributaries of the Rhine, and reappear on the Danube in Bavaria.

Both the surface and the mineral treasures of Germany have been turned to account with energy and skill, and have been made the basis of manufacturing industry, which, varying with the locality, is everywhere active. The horses of Schleswig-Holstein, the wool of Saxony, and Westphalian hams, are famous. Potatoes are largely grown everywhere, furnishing 75 per cent. of the raw material used in the distillation of spirits. Sugar-beet and sugar-factories abound in Prussian Saxony and Alsace-Lorraine. Tobacco is an important crop on both banks of the Rhine above Mainz. The hops of Bavaria supply 5000 breweries in that kingdom, and Bavarian beer is exported even to America and India. Bavarian woodwork is also famous, particularly furniture and toys. The rock-salt of Bavaria, and the brine-springs of Prussian Saxony, seem to be inexhaustible. The principal mining districts are in the kingdoms of Prussia and Saxony. Characteristic of Prussia is amber, picked up along the shores of the Baltic, and also found by digging at some distance inland. By far the largest coal-field is that of Ruhr-Düsseldorf, commonly called Westphalian, but extending also into Rhenish Prussia. Here, accordingly, is the most industrial district in the empire, the chief manufactures being iron and steel wares, cottons and woollens, silk and velvet. Of textile manufactures, linen is the most widely distributed throughout the empire, because it is largely a domestic manufacture. Both flax and hemp are staple crops. For the interchange of com-

modities, ample facilities exist in navigable rivers and canals, good roads, and an extensive railway-system. The Rhine, Elbe, Vistula, and Danube are navigable throughout their whole course within the empire: the Oder is navigable to Ratibor. The Elbe, Oder, and Vistula communicate with one another by canals, and Ludwig's canal, by uniting the Rhine with the Danube in Bavaria, establishes a waterway between the North and Black Seas. The principal imports are colonial produce, raw cotton and silk; the principal exports are grain and wool, linens and hardware, timber and pitch, tobacco and mineral waters.

Even before the formation of the present German Empire, most of the states composing it had united, under the leadership of Prussia, in a Zollverein or Customs Union, which, by collecting the import and export duties, and some of the excise duties also, into a general fund, made these states commercially one. From commercial to political unity, there was but a step; and accordingly, when, in 1870, Napoleon III. declared war against Prussia, all the states of the then Zollverein, and others under their influence, united to repel the French invaders. The present German Empire, dating from 1871, is the monument of the German victory. The King of Prussia is Emperor; and the imperial legislature consists of the Bundesrath or Federal Council, and the Reichstag or Diet of the Empire. The former represents the individual states of the Empire, and its members are chosen by the several state-governments: the latter, the Reichstag, represents the population generally, and its members are elected by ballot and universal suffrage. The Emperor represents the Empire abroad; and war may be declared, if defensive, by him alone; if offensive, by him with consent of the Bundesrath. Each of the states constituting the Empire has its own Diet or Legislature. In six of them, viz., the four kingdoms and the grand-duchies of Baden and Hesse, the diet consists of two chambers: in all the others there is but one chamber. The real basis of German political unity lies in community of race, language, interest, traditions, and aspirations; to which may be added community of religion, Protestantism and Roman Catholicism being regarded merely as two forms of Christianity. The number of Protestants is nearly double the number of Roman Catholics throughout the Empire, the former prevailing in the north, the latter in the south. In respect of church government, the German Protestants, since they have no bishops, may be ranked as Presbyterians. In Prussia, Lutherans and Calvinists are, with few exceptions, united in one communion designated the Evangelical Church. The Germans are a strong race, physically, intellectually, and morally; and the German Empire is the classic land of schools and barracks. Service in the army or navy is obligatory on every man from the completion of his twentieth year, the usual minimum of continuous active service being three years; and public sentiment seconds the law which makes attendance at school compulsory. The consequence is that, as the whole male population is trained to arms, so all adults

know at least to read and write. The secondary schools are of several kinds, according to the destination in life of the pupils; and at the universities, of which there are twenty-one in the Empire, competition is encouraged among the professors, which is one cause of the thoroughness of German books implying research. The only book-fair in the world is held in a German town, Leipsic. Metaphysics, philology including biblical criticism, and music are departments in which Germany confessedly excels.

As the presidency of the German Empire belongs to the crown of Prussia, so BERLIN, the capital of Prussia, is the seat of the imperial government, including the Zollverein. Standing on a level site by the Spree, it has long, wide, and regular streets of brick buildings, many of them coated with plaster. But the only remarkable street is that called *Unter den Linden, i.e.*, Under the Lime-trees, because it is divided into five avenues formed by lime, chestnut, and other trees; it is a mile in length, and leads from the Brandenburg gate to the heart of the city. The new and fashionable quarter of Schöneberg is semi-rustic in character. Politics and government apart, Berlin is a great industrial, trading, and academic centre: its metal castings are famous; in porcelain, it has eclipsed Dresden; in silks and velvets, it competes with the factories of the Rhine province.

The kingdom of Prussia contains more than half of both the area and the population of the German Empire. The royal family belongs to the Evangelical Church, and the Protestants, who form 95 per cent. of the population in the northern provinces, are nearly twice as numerous as the Roman Catholics in the kingdom as a whole. Nevertheless, the number of Roman Catholic priests is nearly as great as that of the Protestant ministers. The dignitaries of the Roman Catholic Church are paid by the State; but the incomes of the ordinary clergy in both communions arise mostly from endowments. Prussia consists of:—

Provinces.	Chief Towns.
East Prussia	Königsberg, Tilsit, Memel.
West Prussia	Dantzic, Elbing, Thorn.
Pomerania	Stettin, Stralsund, Colberg.
Posen	Posen, Bromberg.
Silesia	Breslau, Glogau, Gorlitz.
Brandenburg	BERLIN, Potsdam, Brandenburg, Frankfort-on-the-Oder, Custrin.
Prussian Saxony	Magdeburg, Halberstadt, Halle, Erfurt.
Westphalia	Munster, Minden, Paderborn.
Rhenish Prussia	Cologne, Düsseldorf, Cleves, Bonn, Coblentz.
Hohenzollern	Hechingen, Sigmaringen.
Schleswig-Holstein	Schleswig, Kiel, Flensburg, Lauenburg.
Hanover	Hanover, Hildesheim, Göttingen.
Hesse-Nassau	Cassel, Marburg, Fulda, Wiesbaden, Frankfort-on-the-Main, Nassau.

Detached portions of Prussia are Hohenzollern, which, partly conterminous with Baden, is almost enclosed within the kingdom of Würtemberg: two contiguous districts in Thüringerwald, one with Suhl for chief town, belonging to Prussian Saxony, the other, with Schmalkalden for chief town, belonging to Hesse-Nassau: lastly, Jahde, which does not appear in the above list, purchased from Oldenburg in 1853 for the purposes of a naval station.

The kingdom of Bavaria consists of two very unequal parts, the Palatinate on the left bank of the Rhine, wholly detached from Bavaria properly so called, and forming only one-twelfth of the whole. The royal family, and about two-thirds of the population, are Roman Catholics. In the kingdom of Saxony, the royal family is Roman Catholic, while the population is almost wholly Protestant. In the kingdom of Würtemberg, the royal family and three-fourths of the population are Protestant. In the grand-duchy of Baden the grand-ducal family and the majority of the people are Roman Catholic: of the two universities, Freiburg and Heidelberg, the former is Roman Catholic, the latter Protestant. The grand-duchy of Hesse consists of two nearly equal territories, separated from one another by a strip of the Prussian province of Hesse-Nassau. The grand-ducal family and the great majority of the people are Protestants. The late Grand-Duchess was Princess Alice of England.

The grand-duchy of Saxe-Weimar is the chief of the Thuringian states. It consists of the principalities of Weimar and Eisenach, and of several detached territories. The other Thuringian states are the three Saxe duchies, the two Schwarzburgs, and the two Reusses. The duchy of Saxe-Coburg-Gotha consists of two non-contiguous districts, which can be identified on the map by means of their respective capitals, Coburg and Gotha. Prince Alfred, Duke of Edinburgh, is heir-apparent to this duchy. Rosenau, birthplace of his late father, the Prince Consort, is near to Coburg. The duchy of Saxe-Altenburg consists of two nearly equal parts, the more easterly one, bordering on the kingdom of Saxony, being the more fertile and populous of the two. The duchy of Saxe-Meiningen consists of a main district in the south-west of Thüringerwald, and of several minor portions situated at a considerable distance. Each of the four Thuringian principalities, the two Schwarzburgs, and the two Reusses, consists of several patches. In all the Thuringian states Protestantism prevails.

Of the two Mecklenburg grand-duchies, Schwerin is a maritime state, while Strelitz consists of two inland territories separated from one another by the whole breadth of Mecklenburg-Schwerin, viz., Starburg in the east, and the principality of Ratzeburg in the west. The grand-duchy of Oldenburg is enclosed within the Prussian province of Hanover, except towards the North Sea. The duchy of Brunswick consists of five patches, situated on the south-eastern border of Hanover. The duchy of Anhalt consists of many patches of territory enclosed within Prussian

Saxony. The principality of Waldeck consists of two portions, viz., Waldeck proper and Pyrmont, the latter being famous for its chalybeate waters. The two Lippe principalities are separated from each other by Prussian territory. In these northern states, and in the three free towns, as being also in the north, Protestantism prevails.

The imperial territory of Alsace-Lorraine, wrested from France in 1871, was the scene of the four earliest battles in the Franco-Prussian war, all fought in August 1870, viz., *Weissemburg* and *Wörth*, in Lower Alsace; *Forbach* and *Gravelotte*, in Lorraine. The Emperor of Germany exercises in Alsace-Lorraine the authority exercised by local sovereigns in other parts of Germany, and may depute this authority to a viceroy resident in Strasburg. At least 80 per cent. of the population is Roman Catholic; the rest are Protestants.

EXERCISES.

What are the boundaries of the German Empire? What is its extent in square miles? What is its population? Into how many states is it divided? Name the four kingdoms, and the capital of each. Name the six grand-duchies, and the capital of each. Name the five duchies, and the capital of each. Name the seven principalities, and the capital of each. Name the three free towns. Name the three chief towns in the imperial territory of Alsace-Lorraine. Name the islands and gulfs of the German Empire. What are the principal mountains? Name the lakes. What are the principal rivers?

Where are Dresden, Hamburg, Munich, Stuttgart, Brunswick, Darmstadt, Berlin, Metz? Trace the course of the Rhine and the Elbe, of the Oder and Eider, of the Niemen or Memel. Where are lakes Spirding, Muritz, Chiem, and Ammer?

Between what degrees of latitude and longitude is the German Empire situated? What are its length and breadth? In what respect is the German Empire Germany? By what mountainous districts is the German Empire divided into north and south? On what parallel do these mountainous districts lie? With what frontier ranges is Thüringerwald connected? What mountains break the level of the northern plain? Describe the surface of this plain. What is the prevalent grain in it? In what part of it do the richest wheat-lands lie? Show the character of Southern Germany by describing the kingdoms of Saxony and Bavaria. Between what two towns is the Rhine especially picturesque? Where is the Black Forest, and what is said of it? What else besides the scenery induces many to prolong their sojourn in Southern Germany? What parts of the German Empire drain into the Black Sea, and by what river? Into what seas do all other parts drain? In what quarter are the extremes of temperature of opposite seasons greatest? Account for the average temperature in the north being equal to that of the south. What is the character of Rhenish wine? Up what tributaries of the Rhine do vineyards extend? What river in Bavaria has vineyards?

What provinces are famed for horses, wool, and hams respectively? To what use are potatoes put throughout the empire? In what two

provinces is the beet-sugar industry most active? Where is the tobacco-growing district on the Rhine? Mention two industries characteristic of Bavaria. How is salt obtained in Bavaria and Prussian Saxony respectively? In what two kingdoms are the principal mining districts found? Where and how is amber obtained? Name the largest coal-field. What manufactures have been developed in connexion with it? What textile fabric is the most extensively distributed, and why? What four rivers are navigable throughout their whole course within the Empire? Up to what town is the Oder navigable? What four rivers are connected with one another by canals? How has a water-way been established between the North and Black Seas? Enumerate the principal exports and imports.

What is the Zollverein? What events led to the formation of the present German Empire in 1871? Describe the constitution of the Empire. How are the members of the Bundesrath and Reichstag respectively chosen? Name the six states which have two legislative chambers of their own. What unities underlie the political unity of the German Empire? Where do Roman Catholicism and Protestantism respectively prevail? What proportion do Roman Catholics bear to Protestants throughout the Empire? Why may the German Protestants be called Presbyterians? What is meant by the Evangelical Church in Prussia? Explain the statement that the German Empire is the classic land of schools and barracks. In what departments of learning and art do the Germans confessedly excel? What German town has the only book-fair in the world? Mention one cause of the thoroughness of German research.

What and where is the capital of the German Empire? Describe the street *Unter den Linden*. In what three respects, other than political, is Berlin a great centre? In what manufacture has it eclipsed Dresden? In what other manufactures does it compete with the Rhine province?

What place, in respect of area and population, does Prussia occupy in the German Empire? How is the population divided between Roman Catholicism and Protestantism? How are clerical dignitaries and ordinary clergy respectively paid? Name the five maritime provinces of Prussia. Which three are on the Baltic? Which one is on the North Sea? Which one is on both the North Sea and the Baltic? In which of them are the towns of Stettin, Breslau, Frankfort-on-the-Oder, Magdeburg, Coblentz, Kiel, Göttingen, and Frankfort-on-the-Main respectively? Where is the detached province of Hohenzollern? By means of what towns in Thüringerwald can the detached portions of Prussian Saxony and Hesse-Nassau be identified? Where and what is Jahde?

Distinguish between the two parts of the Bavarian kingdom. What separates from each other the two parts of the grand-duchy of Hesse? In what kingdom is the royal family Roman Catholic, and the people almost wholly Protestant? In Baden, which university is Roman Catholic, and which Protestant? Of what state was the late Princess Alice of England Grand-Duchess?

What grand-duchy is the chief of the Thuringian states? Name the seven other Thuringian states. To which one of them is the Duke of Edinburgh heir-apparent? Name the birthplace of the late Prince Consort. Has any one of the Thuringian states all its territory continuous? What form of Christianity prevails throughout these states?

Name two parts of Mecklenburg-Strelitz. How are these two parts

situated in respect of Mecklenburg-Schwerin? Name the grand-duchy on the North Sea. Of how many patches does the Brunswick territory consist? Within what Prussian province does the duchy of Anhalt lie? To what duchy do the chalybeate waters of Pyrmont belong? By what territory are the two Lippe principalities separated from each other?

In what year did Alsace-Lorraine, from being French, become German? Name the battlefields of 1870, two in Alsace, and two in Lorraine. State the peculiar relation of Alsace-Lorraine to the German Emperor. How is the population of Alsace-Lorraine distributed between Roman Catholicism and Protestantism?

DESCRIPTIVE TABLE.

Aix-la-Chapelle, *aiks-lâ-shâp-ell'* (fountains of the chapel), *Germ.* **Aachen**, an ancient city in Rhenish Prussia, celebrated for its hot baths; it was the favourite residence of Charlemagne and his successors. Pop. 85,551.—50° 46′ N. lat., 6° 4′ E. long.

Alsace-Lorraine, *âl-sâss'-lor-rain'*, or **Elsass-Lothringen**, *el-sâss-lot'ring-en*, a province of the empire, formed of the former French department of Bas-Rhin, and parts of the departments of Haut-Rhin, Moselle, and Meurthe, ceded by France in 1871. Pop. 1,566,670.

Al'sen, a pleasant island in the Little Belt belonging to Prussia, 2● miles long and 5 broad. Pop. 22,500.

Altenburg, *âl'ten-boorg* (the old castle), the capital of the duchy of Saxe-Altenburg, near the Pleisse. Pop. 26,241.

Al'tona (old town), a flourishing seaport of Prussia, province of Schleswig-Holstein, on the Elbe. It is commercially one with Hamburg, and has enjoyed great prosperity since Schleswig-Holstein became Prussian. Pop. 91,047.

Am'berg (at the hill), a fortified town in Bavaria, on the Vils, formerly the capital of the Upper Palatinate. Pop. 14,583.

An'halt, a duchy on the Elbe. Extent, 1020 square miles. Pop. 232,592. *See* REMARKS, page 224.

Anspach, *âns'pah*, or **Ansbach**, *âns'bah* (at the stream), a walled town in Bavaria, on the Lower Rezat. Pop. 14,195.

Ar'olsen, the capital of the principality of Waldeck, on the Aar. Pop. 2477.

Augs'burg, Germ. pron. *owgs'boorg*, an ancient city of Bavaria, at the confluence of the Wertach and the Lech, with considerable trade and manufactures. It was formerly a free city. Here the Protestants, in 1530, presented to the Emperor Charles V. their celebrated *Confession*, drawn up by Luther and Melanchthon. Pop. 61,408.—48, 21 N. 10, 54 E.

Bad'en, Grand-duchy of. Pop. 1,570,254. *See* REMARKS, page 224.

Bad'en (baths), a town in the grand-duchy of the same name, celebrated for its mineral hot baths. It is commonly called Baden-Baden, to distinguish it from the watering-place of Baden, near Vienna. It is beautifully situated on the Oelbach, in the midst of romantic scenery. Pop. 11,923.

Baireuth, or **Bayreuth**, *bi'ruth*, Germ. pron. *bi'roit* (the cleared ground of the Boii or Bavarians), a town in Bavaria, beautifully situated on the Red Main. Pop. 22,072.—49, 57 N. 11, 38 E.

Ballenstadt, *bâl'len-stătt*, a town in Anhalt, on the Getel, with a ducal castle. Pop. 4764.

Bam'berg, a handsome town in Bavaria, on the Regnitz, near its junction with the Main. It has a fine cathedral. Pop. 29,587.—49, 53 N. 10, 59 E.

Bar'men, a thriving manufacturing town in Rhenish Prussia. Its chief manufactures are woollens and cottons. Pop., including suburbs, 95,941.

Bautzen, *bowt'sen* (the huts), a town of Saxony, on the Spree, with considerable manufactures. Here Napoleon I. repulsed the Prussians and Russians in 1813. Pop. 17,509.

Bava'ria, Kingdom of. Pop. 5,284,778. *See* REMARKS, page 224.

Ber'gen, the chief town of the Prussian island of Rugen. Pop. 3616.

Berlin', the capital of Brandenburg and of the Prussian dominions. Pop. 1,122,504.—52, 31 N. 13, 23 E. *See* REMARKS, page 223.

Bernburg, *bern'boorg*, a neat town of Anhalt, on the Saale, with some manufactures and trade. Pop. 18,593.

Bielefeld, *be'leh-felt*, a town of Prus-

sia, province of Westphalia, the centre of the linen and damask manufactures. Pop. 30,679.

Black Forest, *Germ.* **Schwarzwald** (so called from its appearance), an extensive range of mountains in Wurtemberg and Baden, running parallel to the course of the Rhine; the highest peak is 4675 feet above the sea.

Blenheim, *blen'im,* a village in Bavaria, on the Danube, memorable for the victory gained by the Duke of Marlborough and Prince Eugene over the French and Bavarians in 1704.

Bo'chum, a town of Prussia, province of Westphalia, 36 miles N.E. of Dusseldorf. Pop. 33,440.

Bo'den See, or Lake of Con'stance. *See* SWITZERLAND, page 170.

Bonn, an ancient town in Rhenish Prussia, pleasantly situated on the left bank of the Rhine, the seat of a flourishing university. Here the musical composer Beethoven was born in 1772. Pop. 31,514.

Brandenburg, *brăn'den-boorg,* a large and populous province, the nucleus of the Prussian monarchy. It contains 15,532 square miles. Pop. 3,389,155.

Brandenburg, a town, formerly the capital of the province, on the Havel. Pop. 29,066.

Brauensberg, *brow'ens-berg,* a commercial town in E. Prussia, near the Frische Haff. Pop. 11,542.

Bremen, *brem'en,* Germ. pron. *brā'men,* a free city and one of the Hanse Towns, on the Weser, about 40 miles from Bremerhaven, at the mouth of the river. It is, next to Hamburg, the principal emporium of the trade of Germany. Area of the territory, 112 square miles; pop. of the city, 112,453; of the city and territory, 141,127.

Breslau, *bres'lou,* the capital of Silesia, Prussia, situated on the Oder. It has an extensive trade and large manufactures, and is the seat of a flourishing university. Pop. 272,912. —51, 6 N. 17, 4 E.

Brieg, *breeg* (the embankment), a strong town of Prussia, province of Silesia, on the Oder, with extensive manufactures. Pop. 17,508.

Brom'berg, a town of Prussia, province of Posen, on the Brahe, near its confluence with the Vistula. Pop. 34,044.

Bruns'wick, Duchy of. Area, 1525 square miles; pop. 349,367. *See* REMARKS, page 224.

Bruns'wick (the town of Bremo), the capital of the above duchy, on the Ocker, with some interesting relics of the Middle Ages. Its trade is considerable; and its fairs rank next to those of Leipsic and Frankfort. Pop. 75,038.—52, 16 N. 10, 31 E.

Buckeburg, *book'keh-boorg,* the capital of Lippe-Schaumburg, on the Aue. Pop. 5088.

Burg, *boorg,* a thriving manufacturing town in Prussian Saxony. Pop. 15,877.

Carlsruhe, or Karlsruhe, *karls'roo,* a handsome modern city, the capital of the grand-duchy of Baden, near the Rhine. Pop. 49,283.—49, 1 N. 8, 25 E.

Cas'sel, a city of Prussia, province of Hesse-Nassau, on the Fulda. It has several fine buildings, and some manufactures. Pop. 58,290.—51, 19 N. 9, 30 E.

Celle, *tsel'leh,* or **Zell,** *tsel* (chapel or place of worship), a city of Prussia, province of Hanover, on the Aller. Pop. 18,800.

Chemnitz, *kem'nits* (the stony town), a flourishing manufacturing town in Saxony, on a small river of the same name. Here the jurist Puffendorf was born in 1632. Pop. 95,123.

Chiem See, *keem sā,* a lake in Bavaria, about 12 miles in length and 8 in breadth.

Clausthal, or Klausthal, *klous'tâl,* a town of Prussia, province of Hanover, on the Harz Mountains; near it are rich silver and lead mines. Pop. 9007.

Cleves', *Germ.* **Kleve** (the town on the slopes), an ancient town in Rhenish Prussia, near the Rhine, formerly the capital of a duchy of the same name. Pop. 10,059.

Coblenz, *kob'lents* (*Germ.* **Koblenz**), a strong town in Rhenish Prussia, pleasantly situated at the confluence of the Rhine and the Moselle, opposite the fortress of Ehrenbreitstein. Pop. 30,548.

Coburg, *ko'boorg,* the capital of the principality of Coburg, on the Itz. Pop. 15,791.

Coethen, *kut'ten,* a town in the duchy of Anhalt, on the small river Ziethe, with a castle. Pop. 16,153.

Col'berg, or Kol'berg (around the dam), a fortified seaport of Prussia, province of Pomerania, on the Persaute. Pop. 16,027.—54, 9 N. 15, 34 E.

Colmar' (the hill of Mars), a town in Alsace-Lorraine, near the Ill, a principal seat of the cotton manufacture. Pop. 26,106.

Cologne, almost *ko-loyn'* (*Germ.*

Köln), the *Colonia Agrippina* of the Romans, the capital of Rhenish Prussia, on the left bank of the Rhine. It has a great trade, and is the chief medium of intercourse between Holland and Germany. Its cathedral, commenced in 1248 and finished in 1880, is the finest structure in Germany. Here Rubens the painter was born in 1577. Pop. 144,772.—50, 56 N. 6, 57 E.

Con'stance, a fortified town of the grand-duchy of Baden, situated on the lake of the same name; it is famous for the ecclesiastical council held here between 1414 and 1418, which condemned the tenets of Wickliffe, and sentenced John Huss and Jerome of Prague to the flames. Pop. 13,372.

Coslin, or **Koslin**, *kus-leen'* (goat town), a town of Prussia, province of Pomerania, near the Baltic, with woollen manufactures. Pop. 16,834.

Crefeld, or **Krefeld**, *krā'felt*, a town in Rhenish Prussia, with considerable manufactures of silk. Pop. 73,872.

Culm, or **Kulm**, *koolm* (town on the hill), a fortified town in West Prussia, on the Vistula. Pop. 9937.

Curische Haff, *koo'rish-eh hăff*, a lagoon in East Prussia, about 70 miles in length, but of very unequal breadth.

Cüstrin, or **Küstrin**, *kus-treen'*, a strongly fortified town of Prussia, province of Brandenburg, at the confluence of the Warta and the Oder. Pop. 14,069.

Cuxhaven, *kux-hā'v'n* or *koox-hă'fen*, a small seaport at the mouth of the Elbe. Pop. 2200.

Dant'zic (*Germ.* **Danzig**), a city and seaport, the capital of West Prussia, on the Vistula, about 3½ miles from its mouth. It is strongly fortified, and has an extensive trade, particularly in corn, of which it exports large quantities. Here Cluverius, the geographer, was born in 1580, and Fahrenheit, the inventor of the thermometer which bears his name, in 1690. Pop. 108,551. —54, 21 N. 18, 39 E.

Dan'ube (*Germ.* **Donau**), the largest river of Europe, the Volga excepted, has its source from three springs in the grand-duchy of Baden. Pursuing a N.E. course, it becomes navigable at Ulm, receiving the Iller, the Lech, the Isar, the Inn, and the Ens. After passing Vienna, it is joined near Pressburg by the Morava from the north, and in its course eastward and southward is swelled by several large rivers from the mountains of Hungary and Servia. Entering the latter, it separates Bulgaria from Roumania, and, after a course of 1700 miles, discharges itself into the Black Sea by seven mouths.

Darmstädt, *darm'stătt* (town on the river Darm), a walled town, the capital of Hesse, on the small river Darm. Pop. 48,153.—49, 52 N. 8, 39 E.

Dessau, *des'sow*, a strong town of Anhalt, on the Mulda, near its junction with the Elbe. Pop. 23,266.—51, 50 N. 12, 17 E.

Detmold, *det'molt* (the people's place of meeting), the capital of Lippe, on the small river Werra. Pop. 8053.

Deux Ponts, *du pong'* (the two bridges), a town in Rhenish Bavaria, situated on the Erbach. Pop. 9500.

Diepholz, *deep'holtz*, a small lake of Prussia, province of Hanover.

Dietz', a town of Prussia, province of Hesse-Nassau. Pop. 3447.

Dortmund, *dort'moont* (the mouth of the river Dort), a walled town of Prussia, Westphalia, on the Emster. Pop. 66,544.

Dres'den (the haven), the capital of the kingdom of Saxony, and one of the finest cities in Europe, is situated on both sides of the Elbe. Its bridge, palace, and other public buildings, excite general admiration. It is also distinguished for its royal library, museum, and picture gallery. Among its numerous manufactures, the beautiful porcelain of Meissen deserves particular notice. Pop. 220,818.—51, 3 N. 13, 44 E.

Duisburg, *doo'is-boorg*, a town in Rhenish Prussia, near the Rhine. Pop. 41,242.

Duren, *du'ren*, a town of Rhenish Prussia, 18 miles E.N.E. of Aix-la-Chapelle, on the Roer. Pop. 17,368.

Düsseldorf, *dus'sel-dorf* (town on the Dussel), a town in Rhenish Prussia, on the Rhine, at its junction with the Dussel. Pop. 95,458.

Ehrenbreitstein, *ā'ren-brit'stine* ("the broad stone of honour"), a fortress in Rhenish Prussia, one of the strongest in Europe, on the summit of a steep rock, on the E. bank of the Rhine. Pop. 5692.

Eichstadt, *ih'stet*, or **Aichstädt** (oak town), a town of Bavaria, capital of a duchy, on the Altmuhl, with an ancient castle in its neighbourhood. Pop. 7489.

Eisenach, *i'zen-ăh* (the place on the water impregnated with iron), a town in the grand duchy of Saxe-Weimar, on

the Nesse, with a fine ducal palace. Pop. 18,624.

Eisenberg, *i'zen-berg* (iron hill fort), a town of Saxe-Altenburg, with porcelain manufactures. Pop. 6277.

Eisleben, *is'lā-ben,* a town in Prussian Saxony; here Martin Luther was born in 1483. Pop. 18,187.

Elbe, a large river of Prussia, which rises in the Riesengebirge between Silesia and Bohemia. In its course through Saxony and Prussia it receives many tributaries, and falls into the North Sea about 60 miles below Hamburg.

Elberfeld, *el'ber-felt,* a flourishing manufacturing town in Rhenish Prussia, on the Wipper. It is famed for its woollens and cottons. Pop. 93,538.—51, 15 N. 7, 9 E.

El'bing, a trading town in West Prussia, on a river of the same name, which falls into the Frische Haff. Pop. 35,842.

Elsass-Lothringen. *See* **Alsace-Lorraine.**

Em'den (the fort on the Ems), a strong seaport of Prussia, province of Hanover, on Dollart Bay, near the mouth of the Ems, with a good harbour and considerable trade. Pop. 13,667.—53, 22 N. 7, 12 E.

Ems, a fashionable watering-place of Hesse-Nassau, Prussia, on the Lahn, surrounded by beautiful scenery. Pop. 6943.

Ems, a river of Prussia, province of Westphalia, which discharges itself into the North Sea near Emden.

Erfurt, *er'foort,* a fortified town in Prussian Saxony, on the Gera. Pop. 53,254.

Er'langen (the dwelling near aldertrees), a town in Bavaria, on the Regnitz, with a Protestant university. Pop. 14,876.

Erzgebirge, *erts'gā-beer'gā,* the *Ore Mountains,* a chain between Bohemia and Saxony, 4122 feet high. The splendour of their scenery has obtained for them the title of the Saxon Switzerland.

Es'sen, a town in Rhenish Prussia, on the Cologne and Minden Railway. Pop. 56,944.

Ess'lingen, a fortified town in Würtemberg, on the Neckar, with woollen and cotton manufactures, and a good trade in wine. Pop. 20,758.

Eupen, *oi'pen,* a town in Rhenish Prussia, on its W. frontier. Pop. 15,033.

Eyder, or **Eider,** *i'der,* a river of Prussia, between Schleswig and Holstein; it falls into the North Sea.

Eylau, or **Eilau-Preussich,** *i'lou-proi'sish,* a town in East Prussia, where the French defeated the Prussians and Russians in 1807. Pop. 3629.

Femern, *fā'mern* (the place of cattle), a small island of Prussia, in the Baltic, off the N. coast of Schleswig-Holstein.

Flensborg, or **Flensburg,** *flens'boorg,* a flourishing seaport of Prussia, province of Schleswig-Holstein, with an excellent harbour. Pop. 30,956.—54, 47 N. 9, 26 E.

Frank'fort-on-the-Main (ford of the Franks on the river Main), formerly one of the free towns, but now a part of the Prussian province of Hesse-Nassau, is situated on the river Main, about 18 miles from its junction with the Rhine. It has many fine buildings, galleries, and museums. Besides its manufactures, it is the chief emporium of the inland trade of Germany. Here Goethe, the celebrated poet, was born in 1749. Pop. 136,819.—50, 6 N. 8, 36 E.

Frank'fort-on-the-Oder (ford of the Franks on the Oder), a town of Prussia, province of Brandenburg, with considerable trade. Pop. 51,547.—52, 22 N. 14, 33 E.

Freiberg, *fri'berg* (the privileged city), a celebrated mining town of Saxony, situated on the Erzgebirge, at the height of 1179 feet above the sea. The silver mine in its neighbourhood is one of the richest in Europe. It has considerable manufactures of gold and silver lace. Here are the tombs of Werner the geologist, and of many Saxon princes. Pop. 25,445.

Freiburg, or **Freyburg,** *fri'boorg,* a town in the grand-duchy of Baden, in the Black Forest, with a noble Gothic cathedral and a Roman Catholic university. Pop. 36,382.

Frische Haff, *frish'eh hăff* (freshwater bay), a bay or lake in East Prussia, 57 miles long, communicating with the Gulf of Dantzic.

Fulda, *fool'dă* (land stream), a town of Hesse-Nassau, Prussia, beautifully situated on the river of the same name. Pop. 11,507.

Furth, *furt* (the ford), a trading town in Bavaria, on the Regnitz, with a Jewish university, and thriving manufactures of mirrors, jewelry, toys, cotton and woollen fabrics, etc. Pop. 31,063.

Gera, *gā'rā,* an elegant city, the capital of the principality of Reuss

(Younger Branch), on the White Elster, with large manufactures. Pop. 27,118.

Giessen, *ghees'sen,* a town of Hesse, on the Lahn, the seat of a university. Pop. 16,855.

Gladbach, *glăd'băk,* a manufacturing town in Rhenish Prussia, 16 miles W. of Düsseldorf, near the Niers. Pop. 37,387.

Glatz, a fortified town of Prussian Silesia, on the Neisse, with two strong castles. Pop. 13,307.

Glogau, *glo-gou',* or **Gross-Glogau** (the place abounding with white thorn), a strongly fortified town of Prussia, province of Silesia, on the Oder. Pop. 18,630.

Glückstadt, *gluk'stăt* (the fortunate town), a seaport of Prussia, province of Schleswig-Holstein, near the mouth of the Elbe, at its junction with the Rhu. Pop. 5567.—53, 49 N. 9, 26 E.

Görlitz, *gur'lits,* almost *gur'lits* (behind the hill), a town of Prussian Silesia, on the Neisse, noted for its woollen and linen manufactures. Pop. 50,307.

Gos'lar (the site on the Gose), a town of Prussia, province of Hanover, at the foot of the Harz Mountains, famous for its lead and copper mines. Pop. 10,791.

Gotha, *go'tă,* a handsome city, the capital of the duchy of Saxe-Coburg-Gotha, on the Leine, with considerable trade and manufactures. The ducal palace of Friedenstein has a valuable library, museum, picture gallery, and cabinet of coins. Pop. 26,525.—50, 56 N. 10, 43 E.

Göttingen, *gut'ting-en,* a city of Prussia, province of Hanover, on the Leine, the seat of a celebrated university founded by George II. in 1734. Pop. 19,963.—51, 31 N. 9, 56 E.

Graudenz, *grou'dents* (fortified town), a strong town in West Prussia, on the Vistula, the passage of which it commands. Pop. 17,321.

Greifswalde, *grifs-văl'deh* (the griffin's wood), a town of Prussia, province of Pomerania, near the Baltic; it is the seat of a university. Pop. 19,924.

Greitz, *grits,* the capital of the principality of Reuss (Elder Branch), on the Elster, with some manufactures. Pop. 15,061.

Gross Haff (great haven or harbour), or **Stettiner Haff,** *stet-teen'er hăff* (harbour of Stettin), a bay in Pomerania, Prussia, at the mouth of the Oder.

Grünberg, *grun'berg* (green hill), a town of Prussian Silesia, with flourishing manufactures. Pop. 13,039.

Gu'ben (dove town), a town of Prussia, province of Brandenburg, on the Neisse, with flourishing trade and manufactures. Pop. 25,840.

Güstrow, *gust'rov* (guest town), a manufacturing town of Mecklenburg-Schwerin, on the Nebel. Pop. 11,997.

Halberstadt, *hăl'ber-stătt* (the town of Albert, a Duke of Austria), a town of Prussian Saxony, with a noble cathedral. Pop. 31,260.

Halle, *hăl'leh,* a town in Prussian Saxony, on the Saale, the seat of a celebrated university. Here Handel the musician was born in 1684. Pop. 71,484.

Hamburg, *ham'boorg* (the town of the harbour), a free city, one of the Hanse Towns, and the greatest commercial emporium of Germany, and perhaps of the Continent. It is situated on the Elbe, about 70 miles from its mouth. It is intersected by several navigable canals, and has large sugar-refining and other manufactures. In 1842, about a fourth of the city was destroyed by fire, but has since been rebuilt in a much more elegant style. Area of the territory, 150 square miles. Pop. of the city and suburbs, 289,859; of the city suburbs and territory, 410,127.—53, 32 N. 9, 58 E.

Hamm, a town of Prussia, province of Westphalia, on the Lippe. Pop. 20,783.

Hanau, *hă'nou,* a thriving manufacturing and commercial town of Prussia, province of Hesse-Nassau, on the Kinzig, near its junction with the Main. Pop. 23,086.

Hanover, *han'o-ver,* Germ. pron. *han-o'ver,* a province in the north-west of Prussia. It was formerly an independent kingdom, but as one of the results of the war of 1866 it was united to Prussia. It contains 14,700 square miles. With the exception of the Harz district in the south, the country consists of an immense sandy plain; the fertile tracts being confined to the banks of the rivers Elbe, Weser, Ems, and their tributaries. The Harz Mountains are rich in minerals and covered with valuable forests. The manufactures, with the exception of the linens called Osnaburgs, are inconsiderable. The Hanoverians are robust, industrious, persevering, and strongly attached to ancient usages. The University of Göttingen has long been celebrated. Pop. 2,120,168.

Han'over, the capital of the above province, situated on the Leine. It is divided by the river into the old and the new towns, and contains a royal palace and several handsome public buildings. Here Herschel the astronomer was born in 1738, and Frederick Schlegel the philosopher in 1772. Pop. 122,843.—52, 22 N. 9, 44 E.

Harz or **Hartz,** *harts* (a forest), a mountainous tract of country in Prussia, south of Hanover, about 70 miles in length and 20 in breadth, covered with extensive forests. The Brocken, its highest point, is 3658 feet above the sea. The district contains valuable mines of silver, lead, copper, iron, and salt.

Heidelberg, *hi'del-berg,* an ancient city of Baden, on the Neckar, the seat of a flourishing university. The ruins of its castle are magnificent. Pop. 24,417.

Heilbronn, *hil'bron* (fountain of health), a fortified town in Würtemberg, on the Neckar, with considerable trade and manufactures. Pop. 24,415.

Helmstedt, *helm'stett,* a manufacturing town in the duchy of Brunswick, formerly the seat of a university. Pop. 8684.

Hesse, Grand-duchy of. Area, 2964 square miles. Pop. 936,340. *See* REMARKS, page 224.

Hes'se-Cas'sel. *See* **Hesse-Nassau.**

Hesse-Nassau, *hes'se-näs'sou,* a province in the S.W. of Prussia, formed in 1866 of the former principalities of Nassau, Hesse-Cassel, and Hesse-Homburg, and the territory of Frankfort-on-the-Main. It is divided into the governments of Cassel and Wiesbaden. A large portion of the former government is covered with wood, and minerals abound. The climate is severe, and in consequence cultivation is confined to the narrow valleys and the lower hill-slopes. Manufactures of various kinds are carried on, but not on an extensive scale. Its transit trade, arising from its central situation and its navigable rivers, is very considerable. The government of Wiesbaden is mountainous and highly picturesque, beautifully diversified with woods, gardens, and cultivated fields. The vine is here reared with great success, the finest growths of the Rhine, including Hock and Johannisberg, being the produce of this district. It is also famed for its mineral waters. It has productive mines of iron, lead, copper, and silver; and working in metals forms a chief branch of manufacturing industry. Pop. of province, 1,554,376.

Hildburghausen, *hilt'boorg-hou-zen,* a town in Saxe-Meiningen, on the Werra. Pop. 5453.

Hildesheim, *hil'des-hime,* a town of Prussia, province of Hanover, noted for its large cattle fairs. Pop. 25,887.

Hof (enclosure, manor, or dwelling), a town of Bavaria, with considerable trade and manufactures, on the Saléa. Pop. 20,997.

Hohenlinden, *ho-en-lin'den* (the hollow place of the lindens or lime trees), a village of Bavaria, 20 miles east of Munich, where the French, under Moreau, defeated the Austrians in 1800.

Hohenzollern, *ho-en-tsol'lern* (the high place of the Zwolf family), a small but ancient principality, containing about 450 square miles. Pop. 67,624. *See* REMARKS, page 224.

Hol'stein. *See* **Schleswig-Holstein.**

Homburg, *hom'boorg* (high hill fort), a town of Prussia, 9 miles N.N.W. of Frankfort-on-the-Main. Pop. 8336.

Ingoldstadt, *ing'gol-stätt* (the town of Ingold), a strongly fortified town in Bavaria, on the Danube. Pop. 15,251.

Iserlohn, *e-zer-lone'* (the path by the Iser), a town of Prussia, province of Westphalia, with manufactures of copper, bronze, and iron. Pop. 18,611.

Jena, *yā'nă,* a town in the grand-duchy of Saxe-Weimar, on the Saale, the seat of a celebrated university, and the scene of a decisive victory gained by Napoleon I. over the Prussians in 1806. Pop. 10,337.—50, 56 N. 11, 37 E.

Juliers, or **Jülich,** *yu'lih,* a strong town in Rhenish Prussia, on the Roer. Pop. 5295.

Kiel, *keel,* a seaport of Prussia, capital of the province of Schleswig-Holstein, and the seat of a university. It is situated at the E. extremity of the canal which connects the Baltic with the North Sea, and is the great point of communication with Copenhagen and Hamburg. Pop. 43,594.—54, 19 N. 10, 8 E.

Königsberg, *kon'igz-berg,* (Germ. pron. *ku'nihs-berg* (king's mountain), the capital of East Prussia, on the Pregel, near its junction with the Frische Haff. It stands partly on an island, but chiefly on the N. bank of the river, and is the seat of a univer-

sity. Here the philosopher Kant was born in 1724. Pop. 140,909.—54, 42 N. 20, 30 E.

Landau, *lan'dou*, a town of Rhenish Bavaria, on the Queich, 18 miles from Carlsruhe. Pop. 8749, a large proportion being Jews.

Landsberg, *lănts'berh*, a town of Prussia, province of Brandenburg, on the Warta, with considerable trade, particularly in corn and wool. Pop. 23,612.

Landshut, *lănts'hoot* (land's defence), a town in Bavaria, on the Isar. The church of St Martin has a tower 450 feet in height. Pop. 17,225.

Lauenburg, *lou'en-boorg* (lion's fort), a district of Prussia, province of Schleswig-Holstein, on the right bank of the Elbe. It was a separate duchy till 1689, when it passed to the House of Hanover. In 1815 it was ceded to Prussia, but soon after made over to Denmark. In 1865 it was annexed to Prussia.

Leipsic, *lipe'sik*, Germ. **Leipzig**, *lipe'tsih* (the place of the Linden trees), a flourishing commercial city of Saxony, on the White Elster, where it is joined by the Pleisse and Parde, the seat of a celebrated university. At its fairs, which are the most important in Germany, the sale of books is very extensive. It is noted for the signal defeat which Napoleon I. sustained in its neighbourhood in 1813. Here the philosopher Leibnitz was born in 1646. Pop. 149,081.—51, 20 N. 12, 22 E.

Liegnitz, *leeg'nits* (the town on the marsh), a fine old town of Prussian Silesia, on the Katzbach, the scene of a memorable victory gained by Frederick the Great over the Austrians in 1760. Pop. 37,157.

Lippe-Detmold and **Schaumburg-Lippe**, two small principalities in Prussia, prov. Westphalia. Area 610 square miles. Pop. 155,620. *See* REMARKS, page 225.

Lis'sa (woody place), a town in Posen, Prussia, with considerable manufactures. Pop. 11,758.

Lübeck, one of the free cities, on the Trave, about 10 miles from Travemunde, at the mouth of the river; it has considerable trade and manufactures. In the church of St Mary are a famous allegorical picture of the *Dance of Death* and a curious astronomical clock. Here Mosheim, the ecclesiastical historian, was born in 1694. Pop. 51,055.

Ludwigsburg, *lood'vigs-boorg*, a handsome town in Würtemberg, near the Neckar, with a large royal palace. Pop. 16,087.

Lunèburg, *loo'ne-boorg*, a town of N.W. Prussia, province of Hanover, on the Ilmenau. Pop. 19,034.

Magdeburg, *mag'de-boorg*, the capital of Prussian Saxony, on the Elbe, with an active trade. It is one of the strongest fortresses in Europe. Pop. (including Neustadt and Sudenburg) 137,135.—52, 8 N. 11, 38 E.

Main, or **Mayn** (the great water), a river formed by two streams which have their source in the N.E. of Bavaria. It becomes navigable at Bamberg, and, after a very winding course through Bavaria, joins the Rhine nearly opposite Mentz.

Manheim, or **Mannheim**, *măn'hime*, a fine city in Baden, at the confluence of the Neckar and the Rhine, with a palace built by the elector palatine. Pop. 53,465.—49, 29 N. 8, 27 E.

Marburg, *mar'boorg* (the boundary town), a town in Hesse-Nassau, Prussia, on the Lahn, with a university. Pop. 11,225.

Marienburg, *mă're-en-boorg* (the town of the Virgin Mary), a strong town in West Prussia, on the Nogat, a branch of the Vistula. Pop. 9559.

Marienwerder, *mă-re-en-ver'der* (the inclosure dedicated to the Virgin Mary), a town in West Prussia, near the Vistula. Pop. 8238.

Meck'lenburg-Schwerin and **Mecklenburg-Strelitz**, two grand-duchies, N.E. of Hanover, bordering on Pomerania. The whole area is 6269 square miles, of which about five-sixths belong to Mecklenburg-Schwerin. Pop. of Mecklenburg-Schwerin, 577,055; of Mecklenburg-Strelitz, 100,269. *See* REMARKS, page 224.

Meerane, *mā'rā-neh*, a town of Saxony, 21 miles W. of Chemnitz. Pop. 22,293.

Meiningen, *mi'ning-en* (the great field), the capital of Saxe-Meiningen, on the Werra. Pop. 11,227.

Memel, *mem'el* or *mā'mal*, a seaport in E. Prussia, at the entrance of the Curische Haff, which here communicates with the Baltic by a strait. It is a place of great trade, particularly in timber, which is floated down the Niemen. Pop. 19,660.—55, 42 N. 21, 8 E.

Mentz, *ments*, or **Mayence**, *mā-yangss'* (Germ. **Mainz**), a fortified city in Hesse, on the Rhine, nearly opposite the influx of the Main. Here

Guttenberg, one of the inventors of printing, was born about 1400. Pop., exclusive of the garrison, 60,905.

Merseburg, *mer'seh-boorg*, a town in Prussian Saxony, on the Saale. Pop. 15,205.

Metz, *mets*, a strongly fortified city at the confluence of the Moselle and Seille, in Alsace-Lorraine, formerly belonging to France; capitulated to the Germans, October 27, 1870. Pop. 53,131.

Min'den, a fortified town in Westphalia, Prussia, on the Weser. Here the French were defeated by the British and their allies in 1759. Pop. 17,867.

Mühlhausen, *mul-hou'zen* (the mill houses), a fortified town of Prussian Saxony. Pop. 23,478.

Mülhau'sen, or **Mul'house**, a town in Alsace-Lorraine, on the Ill. Pop. 63,629.

Munich, *mū'nik* (Germ. **Munchen**), the capital of Bavaria, on the Isar, containing many edifices, striking memorials of the munificence of its kings. Here are a university and a noble gallery of paintings. Next to Madrid, it is the most elevated city in Europe. Pop. 230,023.

Münster, *mun'ster* (the monastery), a town of Prussia, capital of the province of Westphalia, on a tributary of the Ems. The treaty of peace in 1648, which terminated the Thirty Years' War, was concluded here. Pop. 40,434. —51, 58 N. 7, 37 E.

Müritz See, *mu'rits sā*, a lake in Mecklenburg-Schwerin. It is the largest lake in the N. of Germany.

Naumburg, *noum'boorg* (the new town), a town in Prussian Saxony, on the Saale, with a considerable trade. Pop. 17,863.

Neo'kar, a river which rises in the Black Forest, not far from the sources of the Danube, and, traversing Würtemberg and Baden, falls into the Rhine at Manheim, after a course of 210 miles.

Neisse, *ni'seh*, a fortified town of Prussian Silesia, on a river of the same name. Pop. 20,507.

Neuss, *noiss*, a town of Rhenish Prussia, 4 miles S.W. of Düsseldorf, on a canal which joins the Rhine. Pop. 17,495.

Neuwied, *noi'veet* (new pasture), a thriving town in Rhenish Prussia, on the Rhine, with a museum of antiquities. Pop. 9656.

Nie'men, or **Mem'el**, a river which rises near Minsk in Russia, flows through East Prussia, and falls into the Curische Haff below Tilsit.

Nordhausen, *nort-hou'zen* (north dwellings or town), a flourishing commercial town in Prussian Saxony, on the Zorge. Pop. 26,198.

Nuremberg, or **Nürnberg**, *nurn'-berh* (the fortress of the Noricii), an ancient city in Bavaria, situated on the Pegnitz. Its public library is rich in manuscripts and early editions of printed books. The city is famed for its inventions, particularly that of the watch; and its churches are remarkable for fine specimens of painted glass. Here the painter and engraver Albert Durer was born in 1471. Pop. 99,519.—49, 27 N. 11, 4 E.

O'der, a large river which rises in Moravia, traverses the centre of Prussia, from S. to N., expands into the Gross Haff, and enters the Baltic by three branches, which form the islands of Usedom and Wollin. It communicates by canals with the Elbe and the Vistula.

Offenbach, *of'fen-bah*, a thriving town in Hesse, on the Main, the chief manufacturing place in the Grand-duchy. Pop. 28,449.

Ol'denburg, Grand-duchy of. Area, 2420 square miles. Pop. 337,478. *See* REMARKS, page 224.

Oldenburg, *ol'den-boorg* (old town), the capital of the grand-duchy, on the Hunte, with a ducal castle, several elegant public buildings, and a fine collection of German antiquities. Pop. 20,575.

Op'peln, a well-built town of Prussian Silesia, on the Oder, with an old cathedral. Pop. 14,447.

Os'naburg (*Germ.* **Os'nabruck**), a town of Hanover, Prussia, on the Hase, a branch of the Ems. Here are manufactured the coarse linens known by the name of Osnaburgs. Pop. 32,812.

Pa'derborn, an ancient town of Prussia, province of Westphalia. Pop. 14,689.

Passau, *päs'sou*, a fortified town in Bavaria, at the confluence of the Inn and the Danube. It is romantically situated on a peninsula between the two rivers. Pop. 15,365.

Pforzheim, *pforts'hime*, a walled town in Baden, 17 miles S.E. of Carlsruhe. Pop. 24,037.

Pillau, *pil-lou'*, a fortified seaport in East Prussia, on the Baltic, at the entrance of the Frische Haff. Pop. 3225. —54, 38 N. 19, 54 E.

Plau, *plou*, a lake in Mecklenburg-Schwerin, on which, at the egress of the Elde, is the town of the same name, with a pop. of 4114.

Plauen, a thriving town of Saxony, on the White Elster, with a royal castle. Pop. 35,078.

Pomera'nia, a province of Prussia extending along the S. coast of the Baltic. It contains 12,179 square miles. Pop. 1,540,034.

Posen, *po'zen*, a province of Poland, acquired by Prussia partly in 1773 and partly in 1793. It contains 11,178 square miles. Pop. 1,095,873.

Po'sen, a flourishing commercial city, the capital of the province, on the Warta. It is of great antiquity, and strongly fortified. It was at one time the capital of Poland. Pop. 65,713.

Pots'dam (under the oaks), an elegant town of Brandenburg, Prussia, on the Havel, about 16 miles from Berlin. It is the frequent residence of the Prussian court. Here Alexander von Humboldt, the great naturalist, was born in 1769. Pop. 48,447.

Pregel, *prā'ghel*, a river in E. Prussia, falling into the Frische Haff below Konigsberg.

Prenzlow, *prents'lov*, a thriving town in Brandenburg, Prussia, on the Ucker, noted for its vapour baths. Pop. 16,933.

Prus'sia (Proper) divided into East or Ducal Prussia and West Prussia, bounded on the E. by Russia and Poland. It is the most extensive province of the kingdom, and contains 24,112 square miles. Pop. 3,339,834.

Pyr'mont ("St Peter's mountain)," a town in the principality of Waldeck, 34 miles S.W. from Hanover, famed for its mineral springs. Pop. 5025.

Quedlinburg, *kwed'lin-boorg*, an ancient town of Prussian Saxony, on a tributary of the Saale; here the poet Klopstock was born in 1724. Pop. 18,437.

Rastadt, *räs'tätt* (the town of the council, or court of justice), a strong town in Baden, on the Murg. It has several manufactures, and has been the scene of many diplomatic conferences. Pop. 12,356.

Ra'tibor, a town of Prussian Silesia, on the Oder, which here becomes navigable. Pop. 18,373.

Rat'isbon, or Regensburg, *rā'ghens-boorg* (the fortress on the Regen), an ancient city, long the capital of Bavaria, on the S. bank of the Danube. From 1662 till 1806 it was the seat of the Imperial Diet. It is a place of considerable trade. Six miles distant is the *Valhalla*, a fine Doric marble temple, erected by Ludwig, king of Bavaria, in 1830, for the reception of statues of distinguished Germans. Pop. 34,516.—49, 0 N. 12, 2 E.

Remscheid, *rem'shite* (the watershed of the Rems), a town in Rhenish Prussia, 18 miles E.S.E. of Düsseldorf. Pop. 30,029.

Rendsburg, *rends'boorg*, a strong town in Schleswig-Holstein, Prussia, on the Eyder. Pop. 12,776.

Reuss, a territory in Upper Saxony. It contains 443 square miles. Pop. 152,112. *See* REMARKS, page 224.

Reutlingen, *roit'ling-en*, a town in Würtemberg, on the Eschatz, with considerable trade and manufactures. It was the first town in Swabia which embraced the Reformation. Pop. 16,515.

Rhen'ish Prus'sia, a fertile and beautiful province lying to the S.E. of Westphalia, along both sides of the Rhine; it comprehends the former duchies of Cleves and Berg, and the grand-duchy of the Lower Rhine. Area 10,415 square miles. Pop. 4,074,000.

Rhine, *rīn*, a large and beautiful river, which, rising in Mount Gothard in Switzerland, and passing through the Lake of Constance, divides Switzerland from Germany. It then flows through the German states, till, passing into Holland, it divides into two branches (the larger of which is called the Waal), and falls into the North Sea. Its banks, for a great part of its course, show an unbroken succession of picturesque and beautiful scenery.

Ros'tock, the principal trading port of Mecklenburg-Schwerin, situated on the Warnow, 9 miles from Warnemunde, its outport at the mouth of the river. The chief exports are corn and wool; the chief imports, colonial produce, wine, and manufactured goods. It is the seat of a university. Pop. 36,967.—54, 3 N. 12, 16 E.

Rothenburg, *ro'ten-boorg* (the red fortress), a town of Bavaria, on the Tauber, with an active trade in corn and cattle. Pop. 6504.

Rudolstadt, *roo'dol-stätt* (the town of Rudolph), the capital of Schwarzburg-Rudolstadt, on the Saale, with a castle. Pop. 8747.

Rügen, *ru'ghen*, an island of Prussia, in the Baltic, separated from Pomerania

by a channel a mile broad. Pop. 45,699. —54, 24 N. 13, 30 E.

Saalfeld, *säl'feld* (a plain on the Saale), a town of Saxe-Meiningen, on the Saale. Pop. 7458.

Saxe-Al'tenburg, Duchy of. Area, 504 square miles. Pop. 155,036. *See* REMARKS, page 224.

Saxe-Co'burg-Go'tha, the most southerly of the independent Saxon states. Area, 760 square miles. Pop. 194,716. *See* REMARKS, page 224.

Saxe - Mei'ningen, Duchy of. Area, 953 square miles. Pop., nearly all Protestants, 207,075. *See* REMARKS, page 224.

Saxe-Wei'mar, Grand-duchy of. The area is 1404 square miles. Pop., nearly all Protestants, 309,577. *See* REMARKS, page 224.

Sax'ony, Kingdom of, containing 5787 square miles. Pop. 2,972,805. *See* REMARKS, page 224.

Sax'ony, Prussian, a province W. of Brandenburg, and N. of the kingdom of Saxony. It contains 9748 square miles. Pop. 2,312,007.

Schles'wig-Hol'stein, formerly two duchies of Denmark, now united, and forming a province of Prussia. Area 6959 square miles. Pop. 1,127,149. The town of Schleswig is pleasantly situated on the Schlei, and was originally the headquarters of the Angles. Pop. 15,446.

Schwarz'burg-Rudolstadt', and Schwarz' burg - Sondershau'sen, Principalities of. Area, 696 square miles. Pop. 151,403. *See* REMARKS, page 224.

Schweidnitz, *shwit'nits* (the place of the cornel-tree), a strongly fortified town in Prussian Silesia, in a beautiful situation, near the Riesengebirge mountains. Pop. 22,202.

Schwerin', Lake, in Mecklenburg. Length 14 miles; breadth 3 miles.

Schwerin, *shwā-reen'* ("a place infested by wild beasts"), the capital of Mecklenburg-Schwerin, on the S.W. shore of the lake. Pop. 30,146.

Silesia, *si-le'she-ă,* a province in the S.E. of Prussia, between Austria and Poland; it is the most fertile part of the Prussian dominions, and the seat of the principal manufactures. It contains 15,355 square miles. Pop. 4,007,925.

So'lingen, a thriving manufacturing town in Rhenish Prussia, on the Wipper. Pop. 16,940.

Sondershausen, *son-ders-hou'zen* (the south houses), the capital of Schwarzburg-Sondershausen, on the Wipper. Pop. 6110.

Spandau, *span'dou,* a fortified town in Brandenburg, Prussia, at the junction of the Havel with the Spree. Pop. 29,311.

Spirding See, *speer'ding sā,* a lake in E. Prussia, about 60 miles in circumference.

Spires, *speer* (Germ. **Speyer**), a city of Rhenish Bavaria, on the Rhine. In the German Diet, held here in 1529, the reformers entered that celebrated protest against the emperor's proceedings which procured them the name of Protestants. Pop. 15,589.

Star'gard (ancient fortress), a town of Prussia, province of Pomerania, on the Ihna, with considerable trade. Pop. 21,816.

Stettin, *stet-teen',* a town of Prussia, the capital of Pomerania, on the Oder. It is strongly fortified. Here Catherine II. of Russia was born in 1729. Pop. 91,756.—53, 24 N. 14, 33 E.

Stralsund, *strāl'soont* (the arrow-like strait), a strong seaport of Prussia, province of Pomerania, on the strait separating the Isle of Rügen from the mainland. It has a considerable trade, chiefly in corn. Pop. 29,481.—54, 19 N. 13, 7 E.

Strassburg, *strāss'boorg,* a fortified city of Alsace-Lorraine, on the Ill, near its junction with the Rhine. It is the seat of a university. It formerly belonged to France, and capitulated to the Germans, Sept. 27, 1870. Pop. 104,471.

Strelitz, *strā'lits,* the capital of Mecklenburg - Strelitz, composed of Old and New Strelitz, a mile distant from each other. Pop. 9407.

Stuttgard, *stoot'gart* the (enclosure for horses), the capital of Würtemberg, on the Nesenbach, near its junction with the Neckar. In the royal library is a collection of 12,000 Bibles comprising editions of every age and country. Pop. 117,303.

Syltoe, *sil'tō,* or *sil'tō-eh,* an island of Prussia, on the W. coast of Schleswig-Holstein, famous for oysters.

Thorn, *torn,* a strong town in West Prussia, on the Vistula; here Copernicus the astronomer was born in 1473. Pop. 20,617.

Til'sit, a commercial town in E. Prussia, on the Niemen, remarkable for the peace concluded in 1807 between the Emperor Napoleon I. of France and the Emperor Alexander I. of Russia. Pop. 21,400.

Torgau, *tor'gau* (the market place), a strong town in Prussian Saxony, on the Elbe. Pop. 11,091.

Treves (*Germ.* **Trier**), a city in Rhenish Prussia, beautifully situated on the Moselle. Pop. 24,200.

Tübingen, *tu'bing-en*, a city in Würtemberg, on the Neckar. It is the seat of a university. Pop. 11,708.

Ulm, Germ. pron. *oolm* (the place of elm-trees), a strong town of Würtemberg, situated on the Danube, near its junction with the Iller. Its cathedral is a noble structure 416 feet long, with a tower 337 feet high. Pop. 32,669.—48, 23 N. 9, 59 E.

Usedom, *oo'zeh-dom*, and **Wollin**, *vol-leen'*, two islands of Prussia, province of Pomerania, formed by the mouths of the Oder, which communicate with the Baltic by the Dammer Lake and the Great and Little Haffs. **Swinemünde**, *swe'neh-mun'deh*, a town on the E. coast of Usedom, is the outport of Stettin.

Vis'tula (*Germ.* **Weichsel**), a river which rises in Austrian Silesia, at the foot of the Carpathian Mountains, and, flowing through Poland and West Prussia, divides into three branches; two of which, the Nogat and Old Vistula, run into the Frische Haff, while the main stream, turning westward, falls into the Baltic below Dantzic. The Vistula is navigable for many hundred miles, and is the great channel for conveying corn and other commodities from the interior of Poland.

Wal'deck, Principality of. Area, 439 square miles. Population, nearly all Protestants, 56,522. *See* REMARKS, page 225.

Warta, *vâr'tâ*, a river which rises in Poland, flows past Posen, and joins the Oder at Cüstrin.

Weimar, *vi'mâr* (abounding in vines), the capital of Saxe-Weimar, finely situated on the Ilm. It has long held a high rank as a seat of literature, through the liberal patronage of the ducal family. Pop. 19,944. —50, 59 N. 11, 20 E.

Weissenfels, *vis'sen-fels* (white rock), a town in Prussian Saxony, on the Saale, which here becomes navigable. Pop. 19,654.

Wesel, Nieder, *nee'der vā'zel* (Lower Wesel), a fortified town in Rhenish Prussia, at the confluence of the Lippe and the Rhine. Pop. 20,593.

Weser, *we'ser*, German pron. *vā'zer*, a large river formed by the junction of the Werra and Fulda at Munden; it flows through the territories of Prussia and Brunswick, skirts Oldenburg on the N.E., and falls into the North Sea after a course of 250 miles.

Westpha'lia (the western field), a province of Prussia, S. of Hanover. It contains 7823 sq. m. Pop. 2,043,442.

Wiesbaden, *vees-bâ'den* (the baths in the meadow), a district and town of Prussia, province of Hesse-Nassau; the latter is much frequented for its warm baths and mineral waters. Pop. 50,238.

Wismar, *vis'mâr* (rich or beautiful meadow), a seaport in the grand-duchy of Mecklenburg-Schwerin, on the Baltic, with a good harbour. It has considerable trade in shipbuilding. Pop. 15,518.

Wittenberg, *vit'ten-berg* (white fortress), a strongly fortified town of Prussian Saxony, on the Elbe. It is interesting as the cradle of the Reformation, the two great champions of which, Luther and Melanchthon, are buried in the university church here. Pop. 13,594.

Wolfenbüttel, *vol'fen-but-tel* (dwelling of Wolfa or Ulpha), a town in the duchy of Brunswick, pleasantly situated on the Ocker. It has a public library, containing some of Luther's manuscripts. Pop. 12,131.

Worms, *vorms*, an ancient city in Hesse, on the left bank of the Rhine. At a diet held here in 1521, Luther was excommunicated. Pop. 19,005.

Würtemberg, *vur'tem-berg*, **Kingdom of.** Its area is 7640 square miles. Pop. 1,971,118. *See* REMARKS, page 224.

Würz'burg, *vurts'boorg* (the city of herbs or plants), a strong town in Bavaria, delightfully situated on the Main. It is the seat of a university founded in 1403. Pop., with Marienberg, 51,014.—49, 46 N. 9, 55 E.

Zeits, *tsits*, a town of Prussian Saxony, on the Elster. Pop. 18,265.

Zerbst, *tserpst*, a town in Anhalt-Dessau. Pop. 14,201.

Zittau, *tsit-tou'* (the place of corn), a manufacturing town in Saxony, on the Mandau, an affluent of the Neisse. Pop. 24,473.

Zwickau, *tsvik'ou* (the place of goats), a town in Saxony, on the Mulde, with manufactures of woollens, cottons, and hoisery. Pop. 35,005.

THE AUSTRIAN EMPIRE,

OR THE AUSTRO-HUNGARIAN MONARCHY,

Is bounded N. by Saxony, Prussia, and Russia; W. by Bavaria, Switzerland, and Italy; S. by the Adriatic, Turkey, Servia, and Roumania; E. by Roumania and Russia. It contains 240,943 square miles. Its population is 37,700,000.

Provinces.	Chief Towns.
Austrian Monarchy:—	
Lower Austria	VIENNA, Wiener-Neustadt.
Upper Austria	Linz, Steyer.
Salzburg	Salzburg.
Styria	Grätz.
Carinthia	Klagenfurt.
Carniola	Laybach.
Coast-land	Trieste, Capo d'Istria.
Tyrol and Vorarlberg	Innsbrück, Trent, Botzen.
Bohemia	Prague, Reichenberg, Eger.
Moravia	Brünn, Olmütz.
Silesia	Troppau, Teschen.
Galicia	Lemberg, Brody, Cracow
Bukowina	Czernowitz.
Dalmatia	Zara, Spalato, Ragusa, Spizza.
Kingdom of Hungary:—	
Hungary	Buda-Pesth, Pressburg, Komorn, Schemnitz, Debreczin.
Croatia and Sclavonia	Agram, Esseк.
Transylvania	Klausenburg, Hermannstadt, Kronstadt.
Free Town of Fiume and Territory.	

Mountains.—Besides the Böhmerwald and Erzgebirge on the Bohemian frontier, the Carpathians; Sudetic Mountains; Rhætian, Noric, and Julian Alps.

Lakes.—Zirknitz, in Carniola; Neusiedler See, and Balaton Lake or Platten See, in Hungary.

Rivers.—The middle Danube, with its tributaries, Inn, Drave, Save, March or Morava, Theiss, Maros, and the upper reaches of the Sereth and Pruth; the upper Elbe; the upper Dniester.

REMARKS.

The Austrian Empire extends from 42° 10′ to 51° N. lat., and from 9° 35′ to 26° 30′ E. long. Its length, from E. to W., is 860 miles; its breadth, exclusive of Dalmatia, from N. to S., is 480 miles.

The basin of the middle Danube and its tributaries constitutes the bulk of the Austrian Empire. Consequently, the drainage is eastward, excepting that of Bohemia, which sends its waters northward by the Elbe, as does also Vorarlberg by the Rhine; that of Tyrol, which sends its waters southward by the Italian Adige; and that of Galicia, which drains northward by the Vistula, southward by the Dniester. The largest plain is in Hungary, traversed by that reach of the Danube which flows north and south, and by the Theiss. Here are the largest lakes, Balaton and Neusiedler; but these are more properly marshes, especially the latter, which, after a dry season, is a meadow. Balaton is said to be shrinking; and whenever its bed shall be laid bare, one more sandy waste will disfigure the Hungarian plain. The only other large plain is Galicia. Everywhere else, mountains prevail, the highest summits being in Tyrol, which is another Switzerland. The highest summit of all is Ortler Spitze, 12,814 feet, meeting-point of Tyrol, Switzerland, and Italy. Bohemia is a remarkable mountain saucer, the Elbe escaping northward by the one breach in the rim. Not less mountainous than Tyrol are Styria, Carinthia, and Carniola, in the last of which is the most remarkable of the mountain lakes, Zirknitz. Years may pass without any change, when suddenly its waters disappear into, it is supposed, a cavernous subterranean watercourse connected with the neighbouring stalactitic cavern of Adelsberg. The lake then becomes a meadow, but it may fill again in four-and-twenty hours. Certainly the river Laybach loses itself in the Adelsberg cavern, to reappear eight miles off.

The climate is threefold: that of Galicia and Silesia, and of the greater part of Moravia and Bohemia, which is northern enough not to admit of the vine; that of the sea-board, which is Italian in character, favouring the growth of oil and silk; and that of the intermediate region, the climate of central Europe, the land of wheat, maize, and wine. Throughout, however, the climate varies within short distances, as in all mountainous countries, according to elevation. The extremes of temperature are great at opposite seasons, as might be expected in a country far removed from the moderating influences of ocean. At Buda-Pesth, for instance, amid vineyards, the bridge of boats over the Danube is annually removed in December, because then the river is bridged over with ice. The variety of natural produce within the Austrian Empire renders it comparatively independent of other countries, and favours internal trade, as does also the fact that the provinces in which manufactures flourish most, viz., Silesia, Moravia, Bohemia, Lower Austria, and Vorarlberg, are all in the west. Mining industry is more extensively distributed. Every metal except platinum is found: particularly famous are the mines of rock-salt at Wieliczka, near Cracow, and the quicksilver mines at Idria, in Carniola, only less productive than those of Almaden in Spain. The Danube, which, even where it enters Austrian territory, is navigable by

vessels of 100 tons, becomes, by the breadth and rapidity of its stream, a bar to communication between opposite banks: from Buda-Pesth to its mouth the only bridge across it is the pontoon bridge at Neusatz. The steam-navigation of the Danube and its tributaries; Ludwig's Canal, which connects the Danube with the Rhine; and the Vienna Canal, which connects it with the Adriatic; excellent roads, and an extensive railway system, afford every facility to internal trade. The Semmering Pass in the Noric Alps is crossed by the railway from Vienna to Trieste; the Brenner Pass is crossed by the railway from Innsbrück to Botzen; and the Arlberg tunnel, inferior in length only to the Mont Cenis and St Gothard tunnels, gives direct railway communication between the Tyrol and Switzerland. The inland situation of the Austrian Empire limits its trade with the British Isles. Though second only to France as a wine-producing country, Hungary sends us comparatively little wine, and the precious Tokay is known chiefly by name. The linens of Silesia, Moravia, and Bohemia compete with our own. Bohemian glass is the one article in which the Austrian Empire can claim superiority over all other countries.

Politically speaking, the most important river in the Austrian empire is the Leitha, a secondary affluent of the Danube. In the middle of its course, it separates Austria proper from Hungary, in consequence of which the provinces of the Austrian monarchy are called Cis-Leithan, and those of the Hungarian kingdom Trans-Leithan. These two divisions have separate laws, parliaments, ministries, and finances, but a common sovereign, a common army and navy, and a common governing body, called "The Delegations." This arrangement is called bipartite government. The full style of the sovereign is Emperor of Austria, King of Hungary and Bohemia. No country in Europe, except Russia, contains so many races and languages as does the Austrian Empire. The Germans, who prevail in Austria proper, in the Tyrol and Vorarlberg, and in Carinthia, are the most enlightened part of the population. Magyars, a Mongolian race speaking a language akin to Finnish, prevail in Hungary; and Roumanians, by race and language connected with the ancient Romans, prevail in Transylvania and Bukowina. In other provinces, Sclaves prevail. They are the most numerous race, constituting nearly one-half of the whole population; on the other hand, they are split up into many branches, differing in language, religion, and degree of civilisation, as the Czechs in Bohemia, the Poles and Ruthenians in Galicia, and the Sclavonians in Carniola. The Roman Catholic Church is that of the state, and the Emperor is head of it in all but the name, his sanction being necessary to every ecclesiastical edict. Two-thirds of the population are Roman Catholics; adherents of the Greek Church number three millions, and form the majority in Bukowina; Protestants, to the number of between three and four millions, are found chiefly in Hungary and Transylvania; and Jews, nearly a million and a half altogether,

are most numerous in Galicia and Hungary. Schools are organized as in the German Empire; but attendance, though compulsory by law, diminishes markedly from west to east. There are ten universities, very fairly distributed over the empire. Austria-Hungary has made many contributions to science, few to literature.

Only four towns in the Austrian Empire have more than 100,000 inhabitants, viz., Vienna, its capital; Buda-Pesth, capital of Hungary; Prague, capital of Bohemia; and Trieste, the Liverpool of the empire. VIENNA, charmingly situated on the right bank of the Danube, occupies a small plain, of which the river, by changing its channels and islets, used to make annual havoc. Now one channel traverses the city as a canal; all the others have been turned into one main stream, about a third of a mile in breadth, and the space intervening is occupied partly by new quarters and partly by the Prater, a finely wooded park, and the most frequented promenade. Hills of various height, grassy or wooded, surround Vienna, and on one of them, Kohlenberg, 1000 feet high, a Rigi railway has been established, with a hotel on the top, which commands a view of the Danubian basin, from the Noric Alps to the Carpathian Mountains. The university of Vienna has the largest attendance, and its medical school the highest reputation, of any in the world.

EXERCISES.

What are the boundaries of the Austrian Empire? What is its extent in square miles? What countries does it contain? What are the chief towns in Lower and Upper Austria? In Bohemia? In Moravia? In Galicia? In Hungary? In Transylvania? In Dalmatia? Name two frontier ranges in Bohemia. Name three divisions of the Alps. Name the lakes. Name four tributaries of the Danube wholly within the Austrian Empire. In what provinces are Essek, Olmutz, Trent, Grätz, Innsbrück, Kronstadt, Lemberg, Prague, Vienna, Pesth, Pressburg? etc. Trace the course of the Save,—of the Elbe,—of the Vistula,—of the Dniester.

Between what degrees of latitude and longitude is the Austrian Empire situated? What are its length and breadth? Why does most of its drainage flow eastward? By what three rivers does some of its drainage flow northward? By what two rivers does some of its drainage flow southward? Describe the Danubian plain and its two great lakes. Where is the only other extensive plain? What province has the highest mountains? Which and where is the highest summit? What is the configuration of Bohemia? Describe the phenomena of Lake Zirknitz, and of Laybach River.

How may climate throughout the Austrian Empire be represented as threefold? What modification of this rough division is largely applicable? Characterize the northern climate by the absence of one product, and the southern climate by the presence of another product. State facts showing great extremes of temperature at Buda-Pesth. Why are the extremes greater there than at Paris, notwithstanding the lower latitude of Buda-Pesth? Name the five most highly manufacturing

districts. How is the mining industry distributed? Where are the most famous mines of rock-salt? With what mines are those of Idria compared? In what respect is the Danube a barrier to internal trade? How can a boat on the Danube sail direct into the Rhine and the Adriatic? Over which two passes have railways been carried? Where is the Arlberg tunnel? Name the great wine-growing province and its most precious product. Which provinces manufacture most of the linen? Which one is famous for glass?

What is meant by the Cis-Leithan and Trans-Leithan provinces respectively? In what respects are these two sets of provinces governed separately, and in what respects together? Give the full style of the sovereign over both. In what provinces do Germans prevail? Name and describe the race prevalent in Hungary. Which race is the most numerous of all? What unfits that race for united action? What is the position of the Roman Catholic Church in the Austrian Empire? In which province do Christians of the Greek rite form a majority? In which two provinces are Protestants and Jews respectively most numerous? How are the schools organized? How many universities are there? To what department is it that the Austrian Empire has furnished few celebrated names.

Name the four largest towns in the Austrian Empire. Describe the situation of Vienna. What is the Prater, and how is it situated? What view is obtained from Kohlenberg? What faculty in the university of Vienna is pre-eminent?

DESCRIPTIVE TABLE.

Agram, *ä'grom* or *ō'grom,* a strong town, the capital of Croatia, near the Save. It is called by the natives **Zagrab**. Pop. 20,000,—45° 52′ N. lat., 16° 0′ E. long.

Arad, Old, *or'od,* a strong town of Hungary, on the right bank of the Maros, with a great trade in corn and cattle. Pop. 35,556.—**New Arad,** on the opposite bank of the Maros, has a population of 4000.

Austerlitz, Germ. pron. *ows'ter-lits* (the east town), a small town of Moravia, where Napoleon I. gained a decisive victory over the united forces of Austria and Russia in 1805. Pop. 3487.

Austria, Archduchy of (the eastern kingdom), the hereditary dominion of the imperial family of Austria: it is divided into Upper and Lower Austria. Extent, 12,300 square miles. Pop. 3,090,241.

Baden (*baths*), a town in the province of Lower Austria, celebrated for its hot springs and ba[illegible]. Pop. 9645.

Banat' (The) of Temes, formerly the name of that portion of S. Hungary lying between the Theiss and the Maros.

Bohe'mia (the home of the Boii), a province of the Austrian Monarchy. Extent, 20,500 square miles. Pop. 5,560,819. *See* REMARKS, page 239.

Botzen, *bot'sen,* or **Bolsano,** *bolzä'no,* a fine town of the Tyrol, on the Eisach. Pop. 10,641.

Brazza, *brät'sä,* the largest island of Dalmatia, in the Adriatic. Pop. 15,495.

Brix'en, a town of the Tyrol, at the confluence of the Rienz and the Eisach. Pop. 4842.

Bro'dy (the ford), a town in Galicia, with considerable commerce. Pop. 20,071.

Brünn, *broon* (ford), the capital of Moravia, on the Schwarza. Its manufactures and trade are extensive. Pop. 82,660.—49, 11 N. 16, 36 E.

Buda, *boo'dă* (a hut), Germ. **Ofen**, a city on the right bank of the Danube. With **Pesth,** on the opposite bank of the Danube, it forms the capital of Hungary, and is spoken of as Buda-Pesth. Buda is famous for its baths, and the environs produce excellent wines. Pesth has a richly endowed university, and commands a great inland trade. United pop. 360,551.—47, 29 N. 19, 3 E.

Budweis, *bood'wice* (the district of

but villages), a fortified town of Bohemia, on the Moldau, with flourishing manufactures. Pop, 23,845.

Bukowina, *boo-ko-ve'nă* (the land of beeches), a province of the Austrian Monarchy, on the S.E. of Galicia. Extent, 4014 square miles. Pop. 571,671.

Ca'po D'Is'tria (the summit of Istria), a seaport of Istria, on a small island in the Gulf of Trieste, connected with the mainland by a bridge. P. 8646.

Carinthia, *kar-in'the-ă* (*Germ.* **Kärnthen**), a province of the Austrian Monarchy. Its lead-mines are among the most celebrated in Europe. Chief industry, cattle-rearing. Area, 4006 square miles. Pop. 348,730.

Carlsbad, *karls'bât* (Charles's bath), a town of Bohemia, situated in a charming valley, watered by the Töpel. Its hot baths are among the most famous in Europe. Pop. 10,579.

Carnio'la, *Germ.* **Krain** (the country of the Carni), a province of the Austrian Monarchy. It is noted for its quicksilver-mines. Area, 3857 square miles. Pop. 481,243.

Carpa'thian Mountains, a range which extends above 600 miles, from the N.W. border of Hungary to the Danube on the frontier of Roumania. It separates Hungary from Moravia, Galicia, and the Bukowina; and Transylvania from Roumania. The mountains, to the height of 3600 feet, are generally covered with forests of pine and beech. The most elevated peak Ruska is 9912 feet high.

Catta'ro, a strong seaport near the S. extremity of Dalmatia, on a gulf of the same name in the Adriatic. Pop. 2949.—42, 27 N. 18, 46 E.

Coast-land, a province of the Austrian Monarchy, embracing Göritz, Grandisca, Istria, and Trieste.

Comorn. *See* **Komorn.**

Cracow, *krä'ko*, or Pol. **Krakow**, *krâ'koof*, a city in Galicia, the ancient capital of the kingdom of Poland, is situated in a fine valley on the left bank of the Vistula. It is the seat of a university, and has a cathedral, where the kings of Poland were crowned, and where many of their tombs are preserved. Pop. 66,000.—50, 3 N. 19, 56 E.

Croa'tia and Sclavo'nia, one of the southern provinces of the Kingdom of Hungary. Area, 3643 square miles. Pop. 1,194,415.

Czernowitz or Tchernowitz, *cher'nŏ-vits*, the capital of Bukowina, on a hill near the Pruth. Pop. 45,600.

Dalmatia, a province of the Austrian Monarchy. Area, 4940 square miles. Pop. 476,101.

Danube. *See* GERMAN EMPIRE, page 229.

Debreczin or Debretzin, *dā-bret'sin* (good place), a town of Hungary, on the E. of the Theiss, with various manufactures and considerable trade. It is the seat of a numerously attended Calvinistic college. Pop. 51,122. —47, 32 N. 21, 38 E.

Dnies'ter. *See* RUSSIA, page 213.

Drave, *drave* or *drâv* (Germ. **Drau**), a large river which rises in the Tyrol, flows through Carinthia and Styria, separates Croatia and Sclavonia from Hungary, and joins the Danube 14 miles E. of Essek.

Eg'er, a town of Bohemia, on a river of the same name. Here Wallenstein was assassinated in 1634. Pop. 16,045.

Elbe. *See* GERMAN EMPIRE, p. 230.

Enns, a town of Upper Austria, near the junction of the Enns with the Danube, 10 miles S.E. of Lintz. Pop. 4438.

Erlau, *er'lou* (alder-tree meadow), a fortified town of Hungary, on the Erlau, with considerable trade. Pop. 20,669.

Ess'ek, or Eszek', *Sclav.* **Osek** (high place), a strongly fortified town, the capital of Sclavonia, situated on the Drave. Pop. 17,247.

Etsch, the German name for the river Adige. *See* page 178.

Fiume, *fe-oo'mă* (the river), a seaport of Croatia, at the mouth of the Fiumara, in the Gulf of Quarnero; it is a free port, and formerly possessed an extensive trade. Pop. 20,981.

Fünfkirchen, *funf' keerh-en* (five churches), a royal free town of South Hungary, 105 miles S.S.W. of Buda. Pop. 28,702.

Gali'cia, the north-eastern province of the Austrian Monarchy. Extent, 30,241 square miles. Pop. 5,958,907. *See* REMARKS, page 239.

Göritz, *gu'rits*, German **Görs** (the town on the hill), a town of Coast-land, on the Isonzo. Here Charles X. of France died in 1836. Pop. 20,438.

Gradis'ca, a town of Coast-land, on the Isonzo, the capital of the county of the same name.

Gran, a town of Hungary, the capital of the county of the same name, at the confluence of the Gran with the Danube, 30 miles N.W. of Buda; it has a fine cathedral. Pop. 8932.

Grätz, *grets* (fortified town), a hand-

some town, the capital of Styria, on the Muhr; it is the seat of a university. Pop. 97,791.—47, 4 N. 15, 27 E.

Grosswardein, *gross-var'dine*, a strong city of Hungary, on the Szebes-Körös. Pop. 31,324.

Hermanstadt, *her'man-stätt*, the capital of a government of the same name (sometimes also called the Saxon-land) in Transylvania, situated in a fertile valley watered by the Zibin. Pop. 19,446.

Hun'gary, The Kingdom of, a portion of the Austrian Empire lying to the S. of the Carpathian Mountains. *See* REMARKS, page 239.

Id'ria, a town in Carniola, with valuable mines of quicksilver. Pop. 4174.

Iglau, *ig'lou*, a town of Moravia, on a river of the same name, with considerable manufactures of woollens. Pop. 22,378.—49, 23 N. 15, 36 E.

Inn, a river which rises in Switzerland, crosses the Tyrol, and, after flowing between Bavaria and Austria, joins the Danube at Passau.

Innsbruck, *ins'brook* (the bridge of the Inn), the capital of the Tyrol, on the Inn, on the direct route from Germany to Italy. It stands in one of the most beautiful valleys of the Alps, and is the seat of a university. Pop. 29,790.

Is'tria (water and land), a peninsula between the Gulf of Trieste and the Quarnero Isles. Pop. 292,000.

Jaroslaw, *yä'ro-slav*, a town of Galicia, on the San, with an imperial cloth manufactory. Pop. 12,422.

Karlsburg, or **Carlsburg**, *karls'-boorg*, a town of Transylvania, on the Maros, with a strong fortress. Pop. 7338.

Karl'stadt, or **Carlstadt**, a strong town of Croatia, on the Kulpa. Pop. 5175.

Kaschau, *kä'shou*, an important city of Hungary, on the Hernad. Pop. 22,000.

Ketskemet, or **Kecskemet**, *ketch-kem-ait'*, a town of Hungary, between the Danube and the Theiss. Pop. 44,887.—46, 55 N. 19, 44 E.

Klagenfurt, or **Clagenfurt**, *klä'-ghen-foort*, the capital of Carinthia, on the Glan. Pop. 18,747.

Klausenburg, *klou'zen-boorg*, the capital of Transylvania, beautifully situated on the Little Szamos. Pop. 29,923.

Ko'morn, or **Co'morn**, a strongly fortified town of Hungary, at the junction of the Danube and the Waag. Pop. 13,108.

Königgrätz, *ken'ig-grets* (king's fort), a fortified town in Bohemia, on the Elbe. Near it was fought the decisive battle of Sadowa, which closed the war between Austria and Prussia in 1866. Pop. 8166.

Krem'nitz (stone fortress), a town in the N.W. of Hungary, celebrated for its mines of gold and silver. Pop. 8550.

Kronstadt, *kron'stätt* (crown city), a strong town in the S.E. of Transylvania, with considerable trade and manufactures. Pop., including the suburbs, 29,584.

Laybach, *li'bah* ("warm or leafy brook"), the capital of Carniola, on a river of the same name, with a great transit-trade between Germany and Trieste. Pop. 26,284.—46, 2 N. 14, 30 E.

Lem'berg, the capital of Galicia, on the Peltew; it is the seat of a university, and has a thriving trade. Pop. 109,746.—49, 53 N. 24, 2 E.

Lesina, *les'ē-nä*, an island of Dalmatia, in the Adriatic, S. of Brazza. Pop. 13,000.

Liechtenstein, or **Lichtenstein**, *leeh'ten-stine*, the smallest of the German principalities, bordering on Switzerland. It contains 68 square miles. The family of the reigning prince is one of the most ancient in Europe. Pop. 9124.—The capital is named *Vaduz* or *Liechtenstein*. Pop. 921.

Lintz, or Linz, a fortified town, the capital of Upper Austria, on the Danube, with considerable trade and manufactures. Pop., including the suburbs, 41,687.—48, 18 N. 14, 18 E.

Lis'sa (woody place), a fruitful island of Dalmatia, in the Adriatic. Pop. 4317.

March, *mark*, or **Mora'va**, a river which rises in the lofty Schneeberg, at the junction of Bohemia, Moravia, and Silesia, flows S. through Moravia, separates the archduchy of Austria from Hungary, and falls into the Danube above Presburg.

Maros, *mor-osh'*, or **Marosch**, *mä-rosh'* (the marshy river), a river which rises in the Carpathian Mountains, on the E. border of Transylvania, forms the boundary of the Banat, and falls into the Theiss.

Mele'da, an island of Dalmatia, in the Adriatic, supposed by some to have been the ancient *Melita*. Pop. 900.

Miskolcz, *mish-kolts'*, a town of Hungary, on the W. of the Theiss, in a

rich wine and corn country. Pop. 24,319.—48, 7 N. 20, 47 E.

Moldau, *mol'dou*, a river of Bohemia, which flows northward and joins the Elbe below Prague.

Mora'via (the district of the marshy river), a province of the Austrian Monarchy. Extent, 10,523 square miles. Pop. 2,153,407. *See* REMARKS, page 239.

Mur, or **Muhr**, *moor*, a river which flows through Styria, and joins the Drave in Hungary below Warasdin.

Neusatz, *noi'sâts* (new settlement), a fortified town of Hungary, on the Danube, opposite Peterwardein; it has a considerable trade with Turkey. Pop. 21,325.

Neusiedler See, *noi'seed-ler zā*, a shallow lake in the W. of Hungary; it is 24 miles long and about 10 broad. *See* REMARKS, page 239.

Neusohl, *noi'zōl* (new settlement), a town of Hungary, on the Gran, with valuable copper-mines in its vicinity. Pop. 7159.

Oedenburg, *u'den-boorg*, a town of Hungary, near the Neusiedler See. Pop. of commune, 23,222.—47, 41 N. 16, 38 E.

Olmütz, *ol'muts*, a town of Moravia, on the river March, by which it is almost surrounded. It is strongly fortified. Pop. 22,849.

Pesth, *pest*. *See* **Buda**, p. 242.

Peterwardein, *pe-ter-war'dine*, a strong town in Sclavonia, on the Danube. Here the Austrians, under Prince Eugene, signally defeated the Turks in 1716. Pop. 4022.

Pil'sen, a handsome town of Bohemia, on the Beraun, with flourishing trade and manufactures. Pop. 38,883.

Platten See, *plât'ten sā* (the lake in the marsh), or **Lake Bal'aton**, in the S.W. of Hungary, 48 miles long, and from four to eight broad. Fish of peculiar species abound in its waters. Area, 382 square miles. *See* REMARKS, page 239.

Pol'ten, St, a fortified town in Lower Austria, 35 miles W. from Vienna. Pop. 10,015.

Prague, *prāg* (from Bohemian *prah*, a threshold), a handsome and strongly fortified city, the capital of Bohemia, on the Moldau, over which there is here a beautiful bridge. It is the seat of a university, the oldest in Germany, having been founded in 1348, and is famous as the residence of the reformers John Huss and Jerome of Prague. Here the astronomer Tycho Brahe died in 1601. Pop. 162,323.—50, 5 N. 14, 25 E.

Press'burg, once the capital of Hungary. It is finely situated on an eminence overlooking a vast plain, watered by the Danube. Pop. 48,006.—48, 10 N. 17, 8 E.

Pross'nitz, a manufacturing town of Moravia, 13 miles S.W. from Olmutz. Pop. 18,417.

Raab, *râb* or *râp*, a river of Hungary, rises in Styria, flows N.E., and enters the Danube after a course of 180 miles.

Raab, a town of Hungary, near the junction of the Raab with the Danube. Pop. 20,981.

Ragu'sa, a strongly fortified seaport of Dalmatia, on a peninsula in the Adriatic. Pop. 7245.—42, 38 N. 18, 7 E.

Reichenberg, *ri'hen-berg* or **Liberk**, *le'berk*, a town in the N. of Bohemia, on the Neisse; it has cloth and other manufactures. Pop. 28,090.

Roveredo, *ro-ver-ā'dō* (a place planted with oaks), a town in the S. of the Tyrol, near the Adige, with a strong castle. Pop. 8864.

Salzburg, *sâlts'boorg*, a province of the Austrian Monarchy. Extent, 2767 square miles. Pop. 163,570.

Salz'burg (town on the Salzach), the capital of the above province, finely situated on the Salzach, amid romantic scenery. Here the musical composer Mozart was born in 1756. In its vicinity are the famous salt-mines of Hallein. Pop. 23,499.

San, a river of Galicia, which rises in the Carpathian Mountains, and flowing N.W. falls into the Vistula, near Sandomir.

Save, *sâv*, a large river which rises near Villach in Carinthia, flows through Croatia, separates Sclavonia from Turkey, and falls into the Danube at Belgrade.

Schemnitz, *shem'nits* (the stony town), a town in the N.W. of Hungary, famous for its mines of gold, silver, and lead. Here is a celebrated mining school. Pop., including suburbs, 22,000. —48, 27 N. 18, 50 E.

Schwatz, or **Schwaz**, *shwâts*, a town of the Tyrol, on the Inn, with mines of silver and copper in its vicinity. Pop. 5124.

Sclavo'nia and Croa'tia, one of the southern provinces of the Kingdom of Hungary. Extent, 3613 square miles. Pop. 1,194,415.

Semlin, *sem-leen'*, a fortified town of

Sclavonia, near the junction of the Save with the Danube. Pop. 8915.

Silesia, *si-le'she-ă*, **The Duchy of**, a province of the Austrian Monarchy. Area, 1987 square miles. Pop. 565,475.

Spala'tro, or Spala'to, a seaport of Dalmatia, on the Adriatic, near the ancient *Salo'na* and the ruins of the palace of Diocletian. Pop. 20,860.

Spiz'za, a seaport near the southern extremity of Dalmatia, ceded to Austria-Hungary by the Berlin Treaty of 1878.

Stern'berg, a town in Moravia, with manufactures of woollens, linens, and hosiery. Pop. 14,243.

Steyer, *sti'er*, a town of Upper Austria, on the Ens, with large iron-works and manufactures. Pop. 17,199.

Stuhlweiss'enburg, *stool-vi'sen-boorg* (the seat of the white fortress), a town of Hungary, near Lake Balaton, with large manufactures and cattle-markets. Pop. 25,612.

Styria, *stir'e-ă*, *Germ.* **Steyermark** (the boundary of the River Steyer), a province of the Austrian Monarchy, between the archduchy of Austria and Croatia. Extent, 8670 square miles. Pop. 1,213,597.

Sudet'ic Mountains, a semicircular range of the *Hercynian* chain, which separates Austria from Saxony and Prussia; it is distinguished by the names of the Erzgebirge and the Riesengebirge, *i.e.*, the *Ore* and the *Giant Mountains.*

Szegedin, *seg'ed-in* or *seg-ed-een'*, a town of Hungary, at the confluence of the Theiss and the Maros. It is a place of considerable manufacturing and commercial importance. P. 73,675. 46, 17 N. 20, 10 E.

Tarno'pol (the city among thorns), a town of Galicia, on the Sered. Pop. 25,819.

Temesvar or Temeswar, *tem'esh-vâr* (the fortress on the Temes), a commercial town of S. Hungary. It is situated on the Bega Canal, and is strongly fortified. Pop. 33,694.

Teschen, *tesh'en*, a fortified town of Silesia, on the Olsa, with considerable manufactures. Pop. 9267.

Theiss, *tice*, a large river of Hungary, formed by two streams, the Black and White Theiss. After a S. course of 500 miles, it flows into the Danube below Peterwardein, and is navigable almost to its source, on the borders of Galicia.

Theresienstadt, *ter-ā'ze-en-stätt*, or **Theresianopol**, *ter-ā-ze-an-o'pol* (the town or city of [the Empress] Theresa, a town (or rather a collection of villages) in the S.E. of Hungary, situated on a wide plain. Pop. 61,367.—46, 6 N. 19, 42 E.

Tokay', a town of Hungary, at the confluence of the Theiss and the Bodrog. Its wine is one of the finest and most costly in Europe. Pop. 5100.

Töp'litz, or Teplitz (the place of warm baths), a highly fashionable watering-place in the N.W. of Bohemia, famous for its hot baths. Pop. 16,750.

Transylva'nia (the country beyond the woods), a province of the Austrian Monarchy, to the E. of Hungary. Extent, 21,160 square miles. Pop. 2,115,024.

Trent, or Trient, a city of the Tyrol, on the Adige. It is the *Tridentum* of the Romans, and is famous for the Council of Roman Catholic prelates, from all parts of Europe, held here from 1545 to 1563, for the purpose of suppressing the Reformation. Pop. 19,585.—46, 4 N. 11, 10 E.

Trieste', or Triest', the ancient *Tergeste*, the principal seaport of the Austrian Monarchy, situated on a gulf of the same name, at the N.E. extremity of the Adriatic. Pop. 133,019.—45, 38 N. 13, 46 E.

Troppau, *trop'pou* (the *au* or meadow of the Oppa), a fortified town, the capital of Silesia, on the Oppa. Pop. 24,854.

Tyrol and Vorarlberg, *tir'al*, Germ. pron. *te-rol'* and *for-arl'berg*, a province of the Austrian Monarchy, lying between Venetia and Bavaria, and traversed in its whole extent by the Rhætian Alps. It has a great transit-trade between Germany and Italy. A tunnel has been formed between Tyrol and Switzerland. Extent, 10,981 square miles. Pop. 805,176.

Versecz, Versetz, or Werschetz, *ver'shits*, a fortified town of Hungary, 41 miles S. of Temeswar. Pop. 22,329.

Vien'na (*Germ.* **Wien**), the ancient *Vindobona*, the capital of the empire. Pop., including the suburbs, etc., 1,103,857.—48, 12 N. 16, 23 E. *See* REMARKS, page 241.

Wieliczka, *ve-litch'kă*, or *vya-litch'-kă*, a village in Galicia. Pop. 5973. *See* REMARKS, page 239.

Wiener-Neustadt, *vee'ner-noi'-stătt*, a strongly fortified town of Lower Austria, on the Neustadt Canal. Pop. 23,775.

Za'ra, the capital of Dalmatia, on the Adriatic. It is strongly fortified,

and has an excellent harbour. Pop. 8100.—44, 7 N. 15, 14 E.

Zirk'nitz, a remarkable lake in the duchy of Carniola, in Illyria. *See* REMARKS, page 239.

Zom'bor (behind the wood), a town of S. Hungary, the cap. of the co. Bacs, near the Franz Canal, with a large trade in corn and cattle. Pop. 24,693.

ASIA

Is bounded N. by the Arctic Ocean; W. by the Ural Mountains, the River Ural, the Caspian Sea, Caucasus Mountains, the Black Sea, the Sea of Marmora, the Archipelago, the Mediterranean, the Isthmus of Suez, and the Red Sea; S. by the Indian Ocean; E. by the Pacific Ocean. Its area, including the islands, is estimated at about 18,000,000 square miles, and its population at about 824,000,000.

Countries.	Chief Towns.
Asiatic Russia	Tiflis, Tashkend, Irkutsk, Tobolsk.
Western Turkestan	Bokhara, Khiva.
Asiatic Turkey	Smyrna, Damascus, Bagdad, Mecca.
Independent Arabia	Muscat, Riadh.
Persia	Teheran, Tabriz, Ispahan, Meshed.
Afghanistan	Cabul, Candahar, Herat.
Beloochistan	Kelat.
India	Calcutta, Madras, Bombay, Haidarabad.
Independent Burma	Mandalay.
Siam	Bangkok.
French Cochin-China	Saigon.
Cambodia, French Protectorate	Panompiu.
Anam, French Protectorate	Hué, Hanoi.
Chinese Empire	Pekin, Canton, Tientsin, Hankow.
Corea	King-ki-tao or Sé-Oul.
Japan Isles	TOKIO, Kioto, Osaka.

Islands.—In the Mediterranean, Cyprus; in the Indian Ocean, Ceylon; in the China Sea, Hainan and Formosa; enclosing the Sea of Japan, Japan Isles and Saghalien; enclosing the Sea of Okhotsk, Kurile Isles; in the Arctic Ocean, Wrangel Land and the Liakhovs.

Peninsulas.—Asia Minor, Arabia, Gujerat, Southern India, Malacca, Corea, Kamtchatka.

Capes.—Severo or North-east Cape, Ras al Had, Comorin, Cambodia, Lopatka, East Cape.

Mountains.—Ural, Altai, Thian-shan, Kuenlun, Himalaya, Sulaiman, the Ghauts, Taurus, Lebanon, Sinai.

Plains.—Siberia; Chinese coast-land; Indo-Gangetic plain; table-lands of Arabia, Persia, Afghanistan, and Tibet; great central table-land.

Seas and Gulfs.—Red Sea, Arabian Sea, Persian Gulf, Bay of Bengal, Gulfs of Manaar and Martaban, China Sea, Gulfs of Siam and Tonquin, Yellow Sea, Sea of Japan, Gulf of Tartary, Sea of Okhotsk, Gulfs of Anadir and Obi.

Straits.—Babelmandeb, Ormuz, Palk, Malacca, Sunda, Macassar, La Perouse, Behring.

Lakes.—Dead Sea, Caspian Sea, Sea of Aral, Balkash, Baikal.

Rivers.—Obi, Yenisei, Lena, Amoor or Saghalien, Hoang-ho, Yang-tse-kiang, Mekong, Salween, Irrawadi, Brahmapootra, Ganges, Indus, Oxus or Amoo, Jaxartes or Sir Daria. Euphrates, Tigris, Jordan.

REMARKS.

Asia extends from 1° 20′ to 78° 25′ N. lat., and from 26° to 190° E. long. Its length, from the mouth of the Dardanelles to the Isles of Japan, on the parallel of 40°, is about 6000 miles; its breadth, from the S. extremity of Malacca to Cape Severo in Siberia, is about 5400 miles. It is the largest of the great divisions of the earth, containing about a third of the whole land on the face of the globe, and about two-thirds of the whole human race.

Asia is a continent of table-lands flanked by maritime plains. The highest table-land, that of Tibet, 14,000 feet above the ocean level, lies immediately to the north of the Himalayan chain, in which are the highest summits on the globe, viz., Mount Everest, 29,002 feet, and Kanchinjinga, 28,156 feet. The great central table-land, north of Tibet, has a mean elevation of nearly 11,000 feet. Well-marked, though at lower elevations, are the table-lands of Afghanistan and Persia, of Arabia, and of Asia Minor. Siberia is by far the largest of the maritime plains; the second in size, but the first in importance, is the eastern coast-land of China. Some of the table-lands are so truly basins, or mountain-saucers, that their drainage, instead of reaching the ocean, gathers into lakes and there evaporates. The lakes of the great central table-land are of this nature, but the biggest examples are the Sea of Aral and the Caspian Sea. Some reservoirs of inland drainage lie even below the ocean level; the Caspian Sea does so to the extent of at least 84 feet, and the Dead Sea, the most depressed of all, to the extent of 129½ feet. Countless minor rivers never reach either the ocean or any inland reservoir of drainage, but, on reaching a dry sandy tract, lose themselves in it by many diminishing rivu-

lets. Most of the great rivers of Asia form what is called a twin-river system, rising near to each other, then separating to a great distance, and at length entering the ocean near to each other, or even by one united stream. Such twin-rivers are the Obi and Yenisei, the Yang-tse-kiang and Hoang-ho, the Ganges and Brahmapootra, the Euphrates and Tigris. As Asia surpasses Europe several times in area and population, so its natural features are gigantic compared with their European correspondents. The most conspicuous example is furnished by the mountains. The whole table-land of Tibet is nearly as high as the top of Mont Blanc, which has not much more than half the height of Mount Everest. Moreover, the Himalaya are 400 miles broad, and contain regions where the whole Alpine system of Europe, with its breadth of 75 miles, might be set down without changing the landscape noticeably at a distance of ten miles. The continental mass of Asia being little invaded by arms of the sea, the climate of its extra-tropical regions is characterized by great extremes of temperature at opposite seasons.

Very unequally distributed is the immense population of Asia, three-fourths of it being crowded together in the plains of China and India. These are the regions most highly favoured in respect of soil and climate. China and India are occupied respectively by the Mongolian and the Caucasian races, which, roughly speaking, divide Asia between them, the line of demarcation being the natural barrier formed by the Himalaya and their continuations westward to the Caspian. The civilisation of the Caucasian race in Asia has been lop-sided, the ornamental arts, as those of the goldsmith and jeweller, which minister to luxury, being far in advance of the useful arts, which minister to daily and universal wants; and Mongolian civilisation, represented by that of China, is chargeable with stationariness. The whole north of Asia is Russian ; almost the whole south is either British or under British influence ; the coast-lands of the west are commercially European ; and in the east, American influence is added to European in the direction of progress. Even in the interior, there is probably not a community but has felt in some degree the touch of European civilisation. The distinguishing glory of Asia is that it has given birth to all the great religions of the world,—to Judaism, Christianity, Zoroastrianism, Buddhism, and Mohammedanism. Buddhism counts probably more adherents than any other religion. Extinct now in India, where it originated B.C. 600, it still prevails in south-eastern, eastern, and central Asia. Christianity competes with it in the number of adherents, each counting between 300 and 400 millions.

EXERCISES.

What are the boundaries of Asia? What is its extent in square miles? What is its population? Name the countries which it contains. Which are their chief towns? Name the chief islands of

Asia, and point them out on the map. Name and point out the peninsulas. Name and point out the capes. Name the principal mountains, and trace them on the map. Name the principal plains and table-lands. Name and point out the seas and gulfs. Which are the chief straits? Point them out. Which are the chief lakes? Which are the principal rivers? Trace their course. Where are Western Turkestan, China, Asiatic Russia, Japan? etc. Which are the chief towns of India? Of Tibet? Of Corea? Of Persia? Of China? etc.

Where are Ceylon, Cyprus, Saghalien, Hainan, the Japan Isles? etc. Where are Lebanon, Taurus, the Altai Mountains, Sinai? etc. Where are the Bay of Bengal, Sea of Okhotsk, Persian Gulf? etc.

Where are the Straits of Ormuz, of La Perouse, of Behring, of Malacca, Babelmandeb? etc. Where are Cape Comorin, Lopatka? etc. Trace the course of the Hoang-ho, the Ganges, the Obi, the Tigris, the Yenesei, the Euphrates, the Indus? etc.

Between what degrees of latitude and longitude does Asia extend? What are its length and breadth? What proportion does it bear, in area and population, to the other great divisions of the earth? Give a general view of the surface of Asia. What is the elevation of the highest table-land, and of the largest? Name the highest two mountains, and compare their height with that of Mont Blanc. Of the maritime plains, which is the largest, and which the most important? What becomes of the drainage of a mountain saucer? Give two conspicuous examples. Which of the two is depressed below the ocean-level? What lake is the most depressed of all? Describe the rivers which flow into neither ocean nor lake. What is meant by twin-rivers? Give four examples. In which two of the pairs do the twin-rivers reach the ocean by one united stream? Compare the Alps and the Himalaya. Why are the extremes of temperature at opposite seasons greater in Asia than in Europe?

How is the population of Asia distributed? What two races, roughly speaking, divide Asia between them? What natural barrier has kept these races apart? With what defects is the civilisation of these races respectively chargeable in Asia? Show that European influences are encompassing and permeating Asia. What is the distinguishing glory of Asia? Name the six great religions of the world. In what regions does Buddhism prevail? What religion competes with it in the number of adherents?

ASIATIC RUSSIA

Is bounded, Trans-Caucasia apart, N. by the Arctic Ocean; W. by Russia in Europe and the Caspian Sea; S. by Persia, Western Turkestan, and the Chinese Empire; E. by the Pacific Ocean. It contains about 6,000,000 square miles; population about 13,000,000.

Omitting the Trans-Ural portions of the European provinces Orenburg and Perm, Asiatic Russia consists of Trans-Caucasia, Siberia, and Central Asia, the last two divided into governments as follows:—

Siberia.	Central Asia.
Coast Province.	Akmolinsk.
Amoor Province.	Semipolatinsk.
Trans-Baikal.	Turgai.
Irkutsk.	Uralsk.
Yakutsk.	Semirechensk.
Yeniseisk.	Sir Daria.
Tomsk.	Zarafshan.
Tobolsk.	Amoo Daria.
	Trans-Caspian Territory
	Ferghana.

Islands.—Saghalien, Liakhovs.

Seas and Gulfs.—Sea of Kara, Gulf of Obi, Gulf of Anadir, Sea of Okhotsk, Gulf of Tartary, Behring's Sea.

Mountains.—Caucasus, Ural, Altai, Stanovoi.

Rivers.—Ural, Rion, Kur, Jaxartes or Sir Daria, Obi, Yenisei, Lena, Amoor.

Lakes.—Caspian Sea, Sea of Aral, Balkash, Baikal.

REMARKS.

Asiatic Russia extends from 38° to 78° N. lat., and from 37° E. to 190° E. or 170° W. long. Its length, from the Ural Mountains to the southern extremity of Kamtchatka, is about 3600 miles; its breadth from north to south is about 2000 miles.

Trans-Caucasia apart, the southern boundary consists, towards Persia, of the rivers Aras and Atrek; after which, including Western Turkestan, which is wholly under Russian influence, it may be said to coincide with the northern boundary of Afghanistan; towards the Chinese Empire, it consists of the Thian-Shan and Altai ranges, and the continuations of the latter eastward to Argun River, down which it runs to the Amoor; thence it is continued down the Amoor, up the Usuri, and runs on southwards to D'Anville Gulf, on the Sea of Japan. The surface consists of a maritime plain, an inland depression, and a mountainous region. East of a line drawn through Yeniseisk to the mouth of the Lena, mountains prevail; and that not only in the direction of the Thian-Shan and Altai ranges, but eastward to Behring Strait and down through Kamtchatka. The Yablonoi and Stanovoi ranges overlook the Sea of Okhotsk; the Sikhota Alin range overlooks the Sea of Japan; and Saghalien Island, which separates these seas, arid and low towards the northern end, has wooded hills and two high mountains in the south. The mountainous region has for its largest lake, Baikal, half the size of Scotland, and deeper than the Mediterranean, fed by waters both from within and from without the central table-land. The outflow of Lake Baikal, the Angara, joins the Yenisei,

the longest river in the Russian Empire, and second in Asia only to the Yang-tse-Kiang. West of a line drawn through Yeniseisk to the mouth of the Lena, lie the great maritime plain, rising inland about a foot per mile, and the great inland depression sinking towards the Caspian Sea. The stages of descent are shown by the diminishing elevation above the ocean of its principal lakes:—

Issik-Kul, 4476 feet; Balkash, 600 feet; Aral, 157 feet.

The cold of winter increases from west to east till the coast ranges are reached; and Yakutsk, on the Lena, is said to be the coldest town in the world. No European fruit-tree lives there; yet because of the very hot, though brief, summer, melons ripen in Yakutsk gardens. The Amoor, closed by ice during only five months of the year, is navigated by ocean-going ships; but the mouths of the Arctic rivers are so seldom free of ice that steamers ply only on their inland reaches. The far greater part of this immense region is barren. Wet bogs called *tundras* cover the maritime plain down to about the 65th parallel, the reindeer alone of animals useful to man being able to subsist; then a forest-belt, and an agricultural belt, each of about 5° in breadth, succeed each other. These three regions constitute Siberia. Central Asia is, on the whole, a steppe, with fertile districts towards the mountains, and wherever the surface is irrigated. Its inhabitants are of the Mongolian stock, and profess Mohammedanism. Trans-Caucasia, geographically Asiatic though politically European, is divided physically into two portions by the Suram mountains. Eastward of that range, the surface and climate are those of Central Asia; westward of them, luxuriant forests prevail. In Siberia, the main population consists of officials, convicts, and settlers, Russians all, who carry with them their national church; but towards the Chinese frontier Buddhism prevails, and the Samoiedes, who roam over the *tundras*, are Pagans. The towns of Siberia, with their broad streets and substantial buildings, represent European civilisation; they exist as seats of government, mining centres, and stations on the trade-route from Kiakhta, on the borders of China, to European Russia. The much larger towns of Central Asia, Tashkend and Khokan heading them all, with mud walls, thatch of reeds, and interspersed gardens and vineyards, which give to their narrow streets the air of ill-kept country lanes, represent Oriental civilisation: they are both manufacturing and trading centres. Thinly peopled as all Asiatic Russia is, Central Asia is populous compared with Siberia, having with one-fourth of the area a greater population by one-third.

EXERCISES.

What are the boundaries of Asiatic Russia? What is its extent in square miles? What is its population? What three provinces of European Russia contain districts belonging physically to Asia? Name

the two great divisions of Asiatic Russia and the governments in each. Between what degrees of latitude and longitude is the country situated? What are its length and breadth? Trace its southern boundary. How may the surface of Siberia be described as threefold? Trace the line east of which lies the mountainous region. What ranges overlook the sea of Okhotsk and the sea of Japan respectively? Name and describe the island which separates these seas. Describe the largest lake in the mountainous region. Of what rank among rivers is the Yenisei, into which the lake drains? At what rate does the maritime plain rise inland? What lake is at the bottom of the inland depression? Name three lakes in ascending order above the Caspian Sea. In what direction does the cold of winter increase, and why? Illustrate the extremes of temperature at opposite seasons by the climate of Yakutsk. Contrast the Amoor with the Yenisei, and the Arctic rivers generally, in respect of navigation. What and where are the *tundras?* Of what breadth in Siberia are the forest-belt and the agricultural belt respectively? Of what nature is the surface of Central Asia? How far are the surface and climate of Trans-Caucasia like those of Central Asia? Compare the inhabitants of Siberia and Central Asia in respect of race and religion. Where are Buddhism and Paganism respectively found? Name the two largest towns in Central Asia. Compare the Siberian towns with those of Central Asia. What are the three conditions on one or more of which Siberian towns depend for existence? Compare Siberia and Central Asia in respect of area and population.

WESTERN TURKESTAN

Is bounded N. and W. by Asiatic Russia; S. by Persia and Afghanistan; E. by the Chinese Empire. Its area is about 194,000 square miles, and its population about 3,000,000.

Divisions.—Khanates of Khiva and Bokhara; Turkoman Territory.

River.—Oxus or Amoo Daria.

REMARKS.

Western Turkestan extends from 36° to 44° N. lat., and from 56° to 74° E. long. Its greatest length from E. to W. is about 900 miles; its greatest breadth from N. to S. about 500 miles.

This country is, like Russian Central Asia, a steppe containing alluvial districts yielding immense returns under irrigation. The whole population is of the Mongolian stock, and Mohammedan. Politically too, Western Turkestan really belongs to Russian Central Asia, for the Khanates of Khiva and Bokhara are under Russian influence; and the whole Turkoman Territory has at length submitted to the Russian arms. The towns of Khiva and Bokhara stand in oases created by irrigation. The latter, which ranks with Tashkend in population, is a great seat of Mohammedan learning, and a hotbed of religious fanaticism. Merv, the last stronghold of

the predatory Turkomans, owes all its importance to the river Murghab, which, rising in the mountains of the Afghan frontier, and losing itself in the Kara Kum desert, bears enough water to fertilize a district 90 miles long by 11 miles broad.

EXERCISES.

What are the boundaries of Western Turkestan? What is its extent in square miles? What is its population? Between what degrees of latitude and longitude is it situated? What are its length and breadth? What are its divisions? Name its chief rivers. Of what nature is the surface of the country? Of what race and religion are the inhabitants? For what is the city of Bokhara distinguished? What sort of people are the Turkomans? Give an account of their last stronghold?

DESCRIPTIVE TABLE.

Akhalzik, *ăk-hăl-zeek'* (new fortress), a strongly fortified town of Caucasia, in Asiatic Russia, on the Kur. Pop. 11,000.

Akmolinsk', a government of Russian Central Asia, to the N. of the Sir Daria province. Area 210,555 square miles; pop. 454,205. The seat of government is a town of the same name, on the upper Ishim. Pop. 5711.

Aldan', a river of Siberia, government of Yakutsk. It rises in the Yablonoi Mountains, and after a course of 500 miles joins the Lena, in 63° 12' N. lat., 129° E. long.

Aldan' Mountains, a range in the E. of Siberia; they are a continuation of the Altai, and terminate at Behring Strait. Their average height is about 4000 feet.

Altai Mountains, *ăl-tī'*, more correctly **Alta Yeen Oola** (golden mountains), a vast chain, forming the S. boundary of Siberia, and extending under different names more than 2500 miles, from the sources of the Irtish and the Obi to the shores of the Pacific Ocean. *Bieluka*, the highest peak, is about 12,796 feet above the sea.

Amoo Dari'a, or **Ox'us**, a large river of Central Asia, issues from Lake Siri-kol, N. of the Hindu-Kush, and, flowing through Bokhara and Khiva, falls into the Sea of Aral after a course of 1300 miles.

Amoo Daria, a government of Russian Central Asia, formed from the territory ceded by the Khan of Khiva in 1873. Pop. 220,000.

Amoor', or **Amur'** (great river or great water), or **Saghalien**, *să-gă-leen'*, a large river of E. Asia, which has its source on the borders of Siberia, divides Mongolia and Manchooria from Asiatic Russia, and, after a course of 2641 miles, falls into the Amoor Gulf.

Amoor', or **Amur'**, a province in the E. of Siberia, comprising the country N. of the Amoor River and S. of the Yablonoi Mountains. Pop. 50,000. *Blagoveschensk* is the chief town.

Anadyr, *ă-nă-dēr'*, a river of Siberia; it falls into a gulf of the same name, near Behring Strait.

Ar'al (sea of islands), an inland sea or salt-water lake in Asiatic Russia, E. of the Caspian. Its greatest length is about 3000 miles; its breadth varies from 100 to 240 miles. It receives two large rivers, the Amoo and the Sir Daria; it is nearly 243 feet above the level of the Caspian.

Ar'arat, a celebrated mountain of Armenia, S.W. of Erivan, and a few miles S. of the Araxes. It rises majestically from the midst of a great plain, and terminates in two conical peaks, one of which is covered with perpetual ice. This mountain is held in great veneration, from the belief that it is the Mount Ararat of Scripture, on which the ark rested. The loftiest peak is 17,112 feet, and the other about 13,085 feet above the level of the sea.

A'ras, or **Arax'es**, a large river which rises in Armenia, and flowing eastward joins the Kur. It forms the boundary between Russia and Persia.

Askabad', a strongly fortified place of Russian Central Asia, S. of the Khivan desert.

Baikal, *bi'kâl* (rich sea or abundant water), a lake or inland sea of E. Siberia: it is about 400 miles in length, with an average breadth of 40 miles. The Russians regard it with veneration, and call it the Holy Sea.

Baku', a fortified seaport town of Asiatic Russia, in the lieutenancy of the Caucasus, on the Caspian. In the vicinity are vast pits of naphtha, and from the adjacent plains an inflammable gas continually issues. This natural fire was an object of worship by the Guebres or fire-worshippers. Pop. 15,604.

Balkash', or **Tenghiz**, *ten-gheez'*, a large lake of Russian Central Asia, government of Semirechensk.

Barnaul, *bar-nowl'*, the principal town of the Kolyvan mining district in W. Siberia, government of Tomsk. Pop. 13,529.

Batum, or **Batoum**, *bâ-toom'*, a free port on the Asiatic coast of the Black Sea, 108 miles N.E. of Trebizond.

Behring Sea, *bā'ring*, or **Kamtchatka Sea**, *kâm-chât'kâ*, that part of the North Pacific Ocean which lies between the Aleutian Islands and Behring Strait, by which latter it communicates with the Arctic Ocean.

Behring Strait, the narrow sea which separates Asia from North America, near the parallel of 66° N. It is 36 miles broad, from East Cape in Asia to Cape Prince of Wales on the coast of America. It was so called by Captain Cook in honour of Behring, an eminent Russian navigator, who first discovered it.

Bokhara, Khanate of, *bo-kâ'râ*, a state in Western Turkestan, to the N. of Afghan Turkestan. It is watered by the Amoo Daria, and inhabited by the Usbeck Tartars. In the vicinity of the river the soil is rich and fertile, but a great portion of the country is occupied by the Desert. Pop. estimated at 2,300,000.—The chief city, also called **Bokhara** (the treasury of sciences), is one of the largest and most important towns in Central Asia, and is a great seat of Mohammedan learning, the students being maintained at the public expense. Pop. 70,000.

Cas'pian Sea, an inland sea .. lake, the largest on the globe, lying between Europe and Asia, about 300 miles E. of the Black Sea, and 84 feet below its level. Its length from N. to S. is 750 miles; its average breadth 200 miles; and its area 140,000 square miles. It has no tides, and its water is less salt than that of the ocean.

East Cape, the extreme eastern point of Asia, on the W. shore of Behring Strait.—66, 5 N. 190, 0 E. or 170, 0 W.

Ferghan'a, a government of Asiatic Russia, formerly known as Khokan; it lies to the N. of the Thian-Shan and Pamir Mountains, and is watered by the Sir Daria. Pop. estimated at 800,000.

Georgia, *jor'je-ă*, ancient *Iberia* and *Colchis*, a mountainous region on the S. declivity of the Caucasus, W. Asia, forming the Russian government of Tiflis. Watered by the Kur and numerous tributary streams, it combines the productions of the temperate and tropical climes. The beauty of the Georgian women, like that of the Circassians, is proverbial throughout the East. Area 15,613 square miles; pop. 660,800.

Ili, *e'le*, a river of Russian Central Asia, government of Semirechensk; it [illegible] the Thian-Shan Mountains, flows W. past the town of Kuldja, and, after a course of about 600 miles, falls into Lake Balkash.

Irkutsk, *ir-kootsk'*, a government of Siberia, bordering on N. Mongolia. Pop. 383,578.

Irkutsk, a flourishing commercial city of Siberia, capital of the above government. Pop. 33,860.

Irtish, *ir'tish*, a river of Siberia, which rises in the Altai Mountains, on the borders of Mongolia, flows through Lake Zaisang, and, after a long and winding N.W. course, joins the Obi below Tobolsk.

Jaxartes. *See* **Sir Daria**.

Kamtchatka, *kâm-chât'kâ*, a peninsula in the eastern extremity of Asiatic Russia. Though situated within the temperate zone, the cold is severe, owing partly to the elevated chain of mountains which traverses nearly its whole length, and partly to the winds blowing from the Polar Seas. The country abounds in wild animals, many of which yield valuable furs. The inhabitants live during winter in huts under ground, and travel in sledges drawn by dogs. Pop. about 6500.

Ka'ra, a river forming part of the boundary between European and Asiatic Russia, rises in the Ural Mountains, and enters the Sea of Kara after a northward course of 125 miles.

Kars, a city of Asia, Russian Ar-

menia, on the Arpa-chai, 105 miles N.E. of Erzeroum; it formerly belonged to Turkey, and is famous for its siege and capture by the Russians in 1855, and again in 1877. Pop. 8672.

Khiva, *ke'vâ*, or **Kharesm**, *kâ-resm'*, a khanate in the N.W. of Western Turkestan, under the jurisdiction of Russia. Pop. 200,000. The capital, also called *Khiva*, is situated near the Oxus. Pop. 12,000.

Khojend', a town of Russian Central Asia, on the Sir Daria, in the government of Sir Daria. Pop. estimated at 35,000.

Khokan. *See* **Ferghana.**

Khokan, *ko-kan'*, a town of Asiatic Russia, capital of the government of Ferghana, on the Sir Daria. Pop. estimated at 75,000.

Kiakhta, *ke-âk'tâ*, a frontier town of Siberia, at which and the contiguous Mongolian town of Maimatchin an active trade between Russia and China is carried on. Pop. 4286.

Kirghiz Country, *kir-gheez'*, a region of Central Asia, between Orenburg and the Sea of Aral, partly independent and partly under the sovereignty of Russia. It lies between 44 and 55 N. lat., and 53 and 82 E. long.

Kolyma', or **Koli'ma**, a large river of Siberia, government of Yakutsk; it rises in the Stanovoi Mountains, near 61, 30 N. lat., and, after a N. course of 700 miles, falls into the Arctic Ocean.

Kolyvan', a town of Siberia, government of Tomsk, on the Obi. Pop. 3637.

Krasnoyarsk', a town of Siberia, capital of government of Yeniseisk, on the Yenisei. Pop. 14,159.

Kur, or **Koor**, a river of Transcaucasia, rises on the borders of Armenia, passes Tiflis, and, after being joined by the Aras, falls into the Caspian.

Kur'shee, a town of Bokhara, Western Turkestan. Pop. 10,000.

Le'na, the most easterly of the great rivers of Siberia, rises in the mountains N.W. of Lake Baikal, and falls into the Arctic Ocean by several mouths.

Liakhov' Islands, a group in the Arctic Ocean, about 50 miles from the coast, between the mouths of the Lena and Indigirka. The islands, the largest of which is called *New Siberia*, contain immense alluvial deposits filled with fossil bones of the mammoth, which for many years were a profitable source of wealth to Russia.

Lopat'ka, Cape, the southern extremity of Kamtchatka.—51, 2 N. 156, 46 E.

Merv, an ancient place in Western Turkestan, in the oasis formed by the river Murghab, once a capital of the Seljuk dynasty. It is now merely an extensive collection of wretched hovels. The oasis is occupied by a Tekke-Turcoman population numbering about 500,000, who are under Russian control.

Nertchinsk', a town of Eastern Siberia, government of Trans-Baikal, on the Shilka, an affluent of the Amoor. Pop. 3747.

Ob, or **Obi**, *o'be*, a large river which rises in the Altai Mountains; traversing Siberia, it receives the Irtish, and, after a course of 2500 miles, falls into a deep inlet of the Arctic Ocean, called the Gulf of Obi.

Okhotsk', the capital of a district of the same name in E. Siberia, on the Sea of Okhotsk, at the mouth of the Okhota.

Omsk, a fortified town of Russian Central Asia, government of Akmolinsk, at the confluence of the Om with the Irtish. Pop. 30,890.

Oxus. *See* **Amoo Daria.**

Saghalien, *sâ-gâ-leen'*, or **Tarakai**, *tâ-râ-ki'*, a long and narrow island off the E. coast of Asia, separated from the mainland by the Gulf of Tartary, and from the island of Yesso, Japan, on the S. by the Strait of La Perouse. It belongs to Russia, and is used as a penal settlement. Area estimated at 47,500 square miles; pop. 13,500.

Saghalien River. *See* **Amoor.**

Samarcand', a city of Russian Central Asia, formerly belonging to Turkestan, situated in a fertile plain, on the Zarafshan, 130 miles E. of Bokhara. Pop. 36,000.

Severo, Cape, *sâ-vâ'ro*, or **North-East Cape**, the most northerly point of Asiatic Russia, and of the continent of Asia.—78, 0 N. 104, 0 E.

Sibe'ria, a vast territory in Northern Asia, belonging to Russia, bounded on the N. by the Arctic Ocean; W. by Russia in Europe; S. by Russian Central Asia, Mongolia, and Mantchooria; and E. by the Sea of Okhotsk and Behring Sea. Its length from the Ural Mountains to the S. extremity of Kamtchatka is about 4000 miles; its breadth from N. to S. is about 1900 miles. Area about 4,678,000 square miles; pop. about 3,911,200. *See* ASIATIC RUSSIA, page 252.

Sir Daria, *sēr dâ-re'â*, or **Sihon'**,

ancient *Jaxartes*, a river of Russian Central Asia, flows N.W., and falls into the Sea of Aral, after a course estimated at 900 miles.

Tartary, Gulf of, a part of the Sea of Japan, separating the island of Saghalien from the mainland of Asiatic Russia. It is also called *Bay of Tarrakai*.

Tashkend′, a town of Russian Central Asia, on the Saralka, an affluent of the Sir Daria; it is a great meeting-place of trade routes. Pop. 100,000.

Tcha′ny, a lake of W. Siberia, governments of Tomsk and Tobolsk, 65 miles long and 40 miles broad.

Tif′lis, or **Tef′lis**, the capital of a gov. of the same name in the lieutenancy of the Caucasus, on the Kur, in 40, 41 N. and 44, 50 E.; it is celebrated for its hot baths. Pop 104,024.

Tobol′, a river which flows from the S. of the Ural Mountains, N.E. through Siberia, and joins the Irtish near Tobolsk, after a course of 500 miles.

Tobolsk′, the capital of W. Siberia, at the confluence of the Tobol and the Irtish; it is the chief entrepôt of Siberian commerce with Europe. P. 18,481.

Tomsk, a town of W. Siberia, the capital of the government of the same name, on the Tom, above its junction with the Obi. The university of Tomsk is the first founded in Siberia. Pop. 33,795.

U′ral ("the belt or girdle"), a river of Russia, has its source in the Ural Mountains, and flows into the Caspian Sea after a course of 1040 miles.

Yakutsk, *yá-kootsk′*, a town of E. Siberia, the capital of a government of the same name, on the Lena; it is the chief entrepôt for north-eastern Siberia, and a great mart for furs, ivory, and fossil remains. Pop. 4778.

Yenisei, *yen-ē-sā′ē*, or *yen-ē-sā′* (the new river), a large river of Siberia, issues from the mountains to the S.W. of Lake Baikal, unites with the Angara above Yeniseisk, and flows into the Arctic Ocean after a course estimated at 2500 miles.

Yeniseisk, *yen-ē-sā′isk* or *yen-ē-sāsk′*, a town of Siberia, the capital of a vast government of the same name, on the Yenisei, with an active export trade in furs, and a periodical fair for the sale of Chinese products, etc., resorted to by merchants from all the surrounding regions. Pop. 7181.

Zaisan′, or **Dzaisang′**, a lake of Russian Central Asia, government of Semipalatinsk, until 1879 belonging to China; it is 80 miles in length, 20 miles in breadth, and is traversed by the river Irtish.

TURKEY IN ASIA

Is bounded N. by the Dardanelles, the Sea of Marmora, the Straits of Constantinople, the Black Sea, and Russia; W. by the Archipelago and the Levant; S. by the Mediterranean and Independent Arabia: E. by Persia and Russia. It contains about 754,102 square miles. Its population is estimated at about 12,792,000.

The modern administrative divisions are 22 in number; but many of the names are so strange to our ears that the following more practical enumeration is preferred:—

Divisions.	Chief Towns.
Anatolia, or Asia Minor..........	Smyrna, Brusa, Kaisarieh, Kutayah.
Armenia, part of....................	Erzroum, Trebizond.
Kurdistan............................	Van.
El Jezireh, or Mesopotamia......	Diarbekir, Mosul, Bir.
Irak Arabi, or Babylonia.........	Bagdad, Bussorah.
Syria, including Palestine	Aleppo, Damascus, Beyrout, Jerusalem.
Arabia, parts of.....................	Mecca, Jiddah, Medina, Yembo, Sana, El-Katif.

Islands.—Cyprus, Kos, Lesbos, Patmos, Rhodes, Samos, Scarpanto, Scio.

Mountains.—Taurus, Olympus, Ida, Ararat, Sinai, Lebanon.

Lakes.—Van, Tuz-Gul, Merom, Sea of Galilee, Dead Sea.

Rivers.—Kizil-Irmak, Sakaria, Sarabat, Meander, Orontes, Jordan, Euphrates, Tigris.

REMARKS.

Turkey in Asia (exclusive of the Arabian provinces) extends from 30° to 42° N. lat., and from 26° to 48° 30′ E. long.

Asia Minor is a table-land with about 4000 feet of elevation, Taurus being the best known of the flanking-ranges. It contains many lakes without outlet, one of which, Tuz-Gul, is more salt than even the Dead Sea. The table-land rises north-eastward into the highlands of Kurdistan and Armenia, in the latter of which is Lake Van, also without outlet, and salt, but less so than the Dead Sea, so that its waters abound with fish. In the interior, the extremes of temperature at opposite seasons are very trying; on the coast-lands, the climate is hot from the beginning of June to the middle of September, cold and wet between December and March, and delightful during the rest of the year. Syria is a second table-land, with Lebanon for its principal flanking range. Here is the most remarkable known depression in the earth's surface, that of the Jordan valley: in Merom Lake, the waters of the Jordan are at the ocean-level nearly; in the sea of Galilee, they are 628 feet, and in the Dead Sea 1292 feet below it. The country of the Euphrates and Tigris is an alluvial plain, wearing nearly as desolate an aspect as the equally level Syrian desert to the west of it; but luxuriant crops of rice are obtained after the spring inundation, caused by the melting of snow on the Armenian mountains, and in places the banks are lined with date-groves and vineyards. The Euphrates and Tigris exemplify the twin-river system characteristic of Asia, and are the only navigable rivers of Asiatic Turkey. Their united stream is called Shat-el-Arab. Steamers ply on them, ascending the Euphrates to Bir, the Tigris to Diarbekir. Turkish Arabia comprises the fertile district of El-Hasa, on the Persian Gulf, and the whole Red Sea coast, a region of bare mountains with a narrow seaboard, and not a single permanent stream. The islands of the archipelago are mountainous, with fertile valleys and coast-lands. Two of them are peculiarly situated politically, Samos being a principality tributary to the Sultan, and Cyprus being in the occupation of the British, agreeably to the convention of 1878.

The productions are highly diversified. The Black Sea coast is one forest of oak, beech, plane, ash, and other timber-trees. Grapes and almonds, figs and olives, so abound on the Levantine coasts that trade in dried fruit is the mainstay of the largest towns, particularly of Smyrna. Mocha, on the Red Sea,

gives name to the El-Yemen coffee. Of animals, the Angora goat, which thrives only in a district west of the Kizil-Irmak River, is celebrated for the fineness of its wool. The Turks and Arabs, and most of the Kurds, a turbulent, semi-barbarous race, are Mohammedans. The Greeks and Armenians are Christians, and they preserve their respective nationalities by strict adherence to their respective Churches. The Greeks abound along the coast of Asia Minor and Syria, preferring town-industries to agriculture. The Armenians are farmers at home, merchants abroad: in both Russia and Turkey they prove excellent administrators. What was once their country is now divided among Turkey, Russia, and Persia. Jews form half the population of Jerusalem. Even a better government than that of Turkey would find it difficult to manage a population split up by so many differences of race and religion. In the small district of Lebanon, the Maronites, Roman Catholic Christians whose priests nevertheless marry, live in perpetual feud with the Druses, a pagan tribe despising Christians and Mohammedans alike.

EXERCISES.

What are the boundaries of Turkey in Asia? What is its extent in square miles? What is its population? Name the divisions familiar to Europeans. What are the principal towns of Asia Minor? Of El Jezireh? Of Irak-Arabi? Of Kurdistan? Of Turkish Armenia? Of Syria, including Palestine? Name the principal islands and mountains. Name the lakes. Name the principal rivers.

Where are Jerusalem, Smyrna, Diarbekir, Aleppo, Damascus, Beyrout, the Dead Sea, Mosul, the Meander, the Jordan, the Euphrates? etc.

Between what degrees of latitude and longitude is Turkey in Asia situated? Describe the configuration of Asia Minor in connexion with Kurdistan and Armenia. What two lakes are compared with the Dead Sea, and how? Contrast the climate of the interior with that of the coast. Name the ranges flanking the table-lands of Asia Minor and Syria respectively. Give the particulars of the great depression in the Jordan valley. Where is the one great plain in Asiatic Turkey? What proofs exist that irrigation would fertilize the plain again? At what season do the Euphrates and Tigris overflow their banks, and why? What is meant by the twin-river system, which these rivers exemplify? What is the name of their united stream? Up to what towns are they respectively navigable? What two districts in Arabia belong to Turkey? Compare them. What is peculiar in the political relations of Cyprus and Samos?

What four trees prevail in the Black Sea forest? What city has the dried fruit trade for its mainstay? Find out Mocha and Angora on the map, and state for what they are respectively celebrated. What three races are Mohammedan? What three races are Christian? What tribe despises both Christians and Mohammedans? Where do the Greeks abound, and what occupations do they prefer? What account is given of the Armenians at home and abroad? Among what three powers has their country been divided? To what extent is the population of Jerusalem Jewish? What makes government difficult?

ARABIA

Is bounded N. by Asiatic Turkey; W. by the Red Sea and the Isthmus of Suez; S. by the Indian Ocean; E. by the Gulf of Oman and the Persian Gulf. It contains about 1,219,000 square miles, and a population of about 3,700,000. The Red Sea coast, consisting of the Sinaitic peninsula, El-Hejaz, and El-Yemen, together with the district of El-Hasa on the Persian Gulf, belong to Asiatic Turkey. The political divisions of Independent Arabia are three:—

Divisions.	Chief Towns.
Oman	Muscat, Muttra.
Wahabee kingdom	Riadh.
Jebel Shammar	Hayel.

Islands.—Bahrein, Kooria-Mooria.

Gulfs.—Suez, Akabah, Persian.

Mountains.—Sinai, Horeb, Serbal, Arafat.

Capes.—Ras Mussendom, Ras el Had, Babelmandeb.

REMARKS.

Arabia extends from 12° 40′ to 34° N. lat., and from 32° 37′ to 60° E. long. Its length, from the Straits of Babelmandeb to the Euphrates valley, is about 1500 miles; its breadth, from Ras el Had to Jiddah on the Red Sea, is about 1300 miles.

Arabia is a table-land flanked by mountains on every side except towards the Euphrates valley, where the Syrian desert comes in. The coast ranges are peaked masses of bare rock, except in Oman, where the coast-range is justly called Jebel Akhdar, *i.e.*, Green Mountain. The surface of the interior shows uniform undulations only, except in the central highlands called Nejd, where Jebel Toweyk rises to a height of 5000 feet. Exuberant fertility prevails wherever the ground has moisture in itself, or is imbued with it by irrigation; and the nature of the produce may be inferred from the fact that the coffee-plant is indigenous. Arabian horses are celebrated for docility as well as fleetness; and the dromedary, or one-humped camel, is justly called by the Arabs their "ship of the desert." But the chief distinction of Arabia is to have given birth to Móhammedanism, one of the three great religions of the world. Mecca, the birthplace of Mohammed and Medina, his burial-place, are sacred cities, with specially sacred seasons, which attract pilgrims from all parts of the Mohammedan world. The population is mostly Sunnite; but the Shiite sect prevails on the Persian Gulf, and the central highlands are the home of the Wahabee or puritan form of Mohammedanism. Wahabeeism began as a protest against the

idolatrous veneration of Mohammed and of saints generally, and against luxury, whether in worship by the decoration of mosques, or in private life by extravagance in dress and by self-indulgence. The present Wahabee kingdom is but a fragment of the dominion established by force of arms during the first fervour of this reformation.

The three political divisions above-mentioned account for but a small part of Independent Arabia. Oman, the most considerable division, is but the south-eastern coast-land; and the two inland ones occupy merely the Nejd, or central highlands. Immense are the desert-regions north and south of Nejd, occupied by Bedouins, *i.e.*, wandering Arabs, who live in tents. Each tribe wanders within understood limits in quest of herbage and water, and is ruled patriarchal fashion by a chief, who is often powerful enough to protect caravans and villages for pay. The *sheikh* is merely the elder of a tribe or village; a chief of importance is called Emir. Imaum and Sultan are titles belonging to the heads of settled communities, some of them very small. The petty chief who sold Aden to the British was called Sultan of Lahej.

The British stations in Arabia on the overland route to India are governed from Bombay. They are, Aden, on the El-Yemen shore, outside the strait of Babelmandeb, another Gibraltar; Perim Island, in the strait of Babelmandeb, on which a lighthouse is maintained; and the Kooria Mooria group, off the Oman coast, one of which accommodates the Indian telegraph cable. To prevent the slave-trade and piracy, the British have made treaties with the petty Sultans of Hadramaut and Mahrah along the southern coast.

EXERCISES.

What are the boundaries of Arabia? What is its extent in square miles? What is its population? What portions of it belong to Asiatic Turkey? Name the three political divisions of Independent Arabia. What are their chief towns? Name the gulfs and islands of Arabia. Name its mountains and capes.

Between what degrees of latitude and longitude is Arabia situated? What are its length and breadth? On what side alone is the Arabian table-land unflanked by mountains? In what quarter is the flanking-range green? What sort of surface prevails in the interior? Name the highest mountain of the central highlands. On what does fertility depend? What indigenous plant is a type of Arabian produce? Describe the Arabian camel. Why do pilgrims crowd to Mecca and Medina? Name the three Mohammedan sects, and state where they respectively prevail. Of what nature was the Wahabee reformation?

Which is the most considerable state in Independent Arabia? What life do the Bedouins lead? What two titles are given to their chiefs? What two titles belong to the heads of settled communities? From whom did the British purchase Aden? Where and what is it? What are the uses of Perim island and the Kooria Mooria group respectively? What is the object of the treaties between the British government and the petty sultans of the southern coast?

PERSIA

Is bounded N. by Russian territory and the Caspian Sea; W. by Turkey in Asia; S. by the Persian Gulf and Sea of Oman; E. by Afghanistan and Beloochistan. It contains about 636,000 square miles. Estimated population, 5,000,000.

The provinces of Persia are thirteen in number, all with unfamiliar names. The following are the chief towns:—

In the North.........Asterabad, Amol, Resht, Tabreez, Kasbin, Teheran. Meshed.
In the West..........Hamadan, Kermanshah.
In the Centre........Ispahan, Yezd.
In the South.........Shiraz, Kerman, Bushire.

Islands.—Ormuz, Kishm, Karak.
Lakes.—Urumiah, Bakhtegan, Hamun.
Mountain.—Elburz.
Rivers.—Aras, Kizil-Uzen.

REMARKS.

Persia extends from 26° to 39° N. lat., and from 44° to 63° E. long. Its extreme length, from the River Aras to the frontier of Beloochistan, is about 1300 miles; its breadth, from the Shat-el-Arab to the borders of Afghanistan, is about 800 miles.

Persia, called Iran by the natives, forms one table-land with Afghanistan and Beloochistan. On the eastern frontier, accordingly, there is no flanking range. In that direction, the three countries just named meet in the immense salt swamp of Hamun. On every side but the east, the Persian table-land is well buttressed with mountains, the best defined being the Elburz range, which shuts it off from the Caspian, and culminates in Mount Demavend, 18,460 feet high, an extinct volcano yielding saltpetre, sulphur, and pumice. The northern slope of this range is the one forest-region in Persia; here also are almost all the fresh-water lakes of the country, numerous but small. Of salt-water lakes, the largest, after Hamun, are Urumiah, west of Tabreez, at a height of 4000 feet, and too salt for fish to live in it, and Bakhtegan, east of Shiraz; all without outlet. Not a single river wholly Persian is navigable, nor does any one that rises fairly within the table-land reach the sea. Saline incrustations, rendering the land permanently barren, increase from west to east, and at length prevail; but wherever they are absent, irrigation commands fertility. The mulberry, cotton-shrub, and sugar-cane are extensively grown. The fruits are fine, and the wine of Shiraz is celebrated. The horses surpass those of Arabia in beauty, though

not in speed; and the sheep are remarkable for their large tails, some of which weigh 30 lbs. and more. The climate is one of extremes on the table-land, and of a tropical character along the coasts; dry along the Persian Gulf, with the date for the only tree, moist along the Caspian, with luxuriant vegetation. The difference of elevation accounts for the apparent paradox of a practically tropical region being situated north of the Elburz range rather than south of it.

The Persians proper are an intellectual people; the politest also in the world, but not the most sincere. Every village has its school, and literature is widely appreciated. The townsfolk excel in the manufacture of jewelry, sword blades, gold and silver brocade, carpets, silks, velvets, woollen and cotton cloths, and camlets of goat and camel hair. Nearly half the population is pastoral, and some of it nomadic; but these wanderers are immigrants from neighbouring countries. The Persians shrink from the sea; the whole trade of the Caspian is in Russian hands, that of the Persian Gulf is shared between the Arabs and the British. Almost the whole population is Mohammedan, of the Shiite sect. The government is despotic. The capital, Teheran, situated in a stony plain about ten miles south of the Elburz mountains, is approached by roads leading through cemeteries. Surrounded by a mud wall twenty feet high, it is a labyrinth of filthy lanes, winding among tumble-down buildings: the better houses and the well-kept gardens are generally within high walled enclosures. In summer, the Shah, as the sovereign is called, and the wealthier classes escape the heat, the venomous insects, and the intermittent fever of Teheran, by removing to a town of tents at the foot of the Elburz mountains.

EXERCISES.

What are the boundaries of Persia? What is its extent in square miles? What is its population? Name the principal towns in the north. Which three of them are on the Caspian coast-land? Where are Hamadan, Ispahan, Teheran, Bushire, Kasbin? etc. Name the islands, lakes, rivers, and the one mountain range.

Between what degrees of latitude and longitude is Persia situated? What are its length and breadth? What is the native name of the country? What two countries form with Persia one table-land? What two countries meet Persia in Hamun? On what side is the Persian table-land unflanked with mountains? What about the highest summit of the Elburz range? Where is the one forest-region? Name the two largest salt lakes, after Hamun. Of what nature are the Persian rivers? Mention one cause of permanent barrenness. Name a few of the characteristic products. What about the horses and the sheep of Persia? Compare the climate of the table-land with that of the coasts. Compare the climate of the Caspian coast with that of the Persian Gulf coast. How does there come to be a tropical climate immediately north of the Elburz range, and not also immediately south of it?

What sort of people are the Persians proper? In what manufactures do they excel? In whose hands is the shipping on the Caspian Sea,

and in the Persian Gulf respectively? What is the religion of the great majority? Of what nature is the government? Name and describe the capital. To avoid what do nearly one-half of the inhabitants leave it in summer for the hills?

DESCRIPTIVE TABLE.

Acre, *ăk'er*, or *ā'ker*, or **St Jean d'Acre,** *seng-zhăng-dăk'r*, called by the Arabs **Akka** (the sultry or sandy shore), a fortified city and seaport of Syria, on a fine bay of the Mediterranean. It is celebrated in the history of the Crusades. More recently, in 1799, it resisted the attack of Napoleon I., who, after besieging it for two months, was compelled to retreat. In 1840 it yielded, after a few hours' cannonade, to the British fleet. Pop. 10,000.—32° 54′ N. lat., 35° 5′ E. long.

Ada'lia, or **Sata'liah,** a seaport of Asia Minor, at the head of a gulf, to which it gives name, on the Mediterranean. Pop. 8000.—36, 52 N. 30, 44 E.

Ada'na, a city of Caramania, in Asiatic Turkey, in a fertile plain, on the Sihoon. Pop. 24,000.—37, 5 N. 35 12 E.

Aden, *ā'den*, or *ă'den* (a paradise), a strong seaport of Yemen, Arabia, near the entrance of the Red Sea; it now belongs to Britain. Pop. 35,165.—12, 46 N. 45, 10 E. *See* REMARKS, page 261.

Adramyti, *ă-dră-me'te*, ancient *Adramyttium*, a seaport town of Asia Minor, near the head of the Gulf of the same name, with large trade in olives, gall-nuts, and wool. Pop. 5000.

Aidin, *ī'deen*, a town of Asia Minor, vilayet of Aden; has extensive commerce. It is also called **Guzel-Hissar,** *gu-zel'hiss-ar'* (the beautiful castle). Pop. 30,000.

Afium-Kara-Hissar, *ă-fe-oom' kă-ră' hiss-ăr'* (black castle of opium), a city of Anatolia, Asiatic Turkey, with considerable trade in opium and madder. Pop. 60,000.

Ainad, *ine'ăd*, a town of Arabia, province Hadramaut, 207 miles N.E. of Aden. Pop. 10,000.

Aintab, *ine'tăb*, a town on the N. frontier of Syria. Pop. 20,000.

A'kaba, Gulf of (cliff or steep acclivity), an inlet forming the N.E. extremity of the Red Sea, and the E. boundary of the peninsula of Sinai.

Ak-Hissar' (white castle), ancient *Thyatira*, a town in Anatolia, Asiatic Turkey, noted for the excellence of its scarlet dye. Pop. 8000.

Ala-shehr' (the exalted city), ancient *Philadelphia*, a walled city in Anatolia, Asiatic Turkey. Pop. 15,000.

Alep'po, a city of Syria, Asiatic Turkey, built on several hills. It is the seat of a great inland trade. Pop. estimated at 70,000.—36, 11 N. 37, 10 E.

Algezira, *ăl-je-ze'ră* (the island), ancient *Mesopotamia*, a district of Asiatic Turkey, between the Euphrates and the Tigris.

Ama'sia, a city of Asiatic Turkey, vilayet of Sivas, on the Yeshil-Irmak. Here Strabo, the Greek geographer, was born about the year 50 B.C. Pop. 25,000.—40, 33 N. 36, 25 E.

Amol', a city of Persia, on the Herauz, near the Caspian. Pop. in winter, when it is greatest, estimated at from 35,000 to 40,000.

Anato'lia (the country of the rising sun), the name sometimes given to the whole of Asia Minor, but which properly belongs only to the W. part.

Ango'ra, ancient *Ancyra*, a city of Asiatic Turkey, capital of vilayet of same name. Shawls manufactured from Angora goat wool rival those of Cashmere. Pop. 38,138.—39, 56 N. 32, 50 E.

Antioch, *ăn'te-ok*, a city of Syria, on the Orontes, celebrated in ancient history as the capital of the Syrian monarchs, and one of the largest and most magnificent cities in the East. Here the followers of our Saviour were first called Christians. Pop. 18,000.—Antioch has severely suffered from earthquakes; one of which, on 3rd April 1872, destroyed more than a third of the city.—36, 11 N. 36, 9 E.

Arafat' (gratitude), a hill in Arabia, near the city of Mecca, a visit to which forms a necessary part of the great Mohammedan pilgrimage.

Arme'nia, a country of W. Asia, S. of Caucasia and Georgia, partitioned among Russia, Turkey, and Persia. It is in general mountainous, and is watered by the Tigris, the Euphrates, and other streams. Pop. 1,900,000. *See* REMARKS, pages 258-59.

A'sia Mi'nor, the western portion of Asia, bounded on the N. by the Black

Sea, W. by the Archipelago, and S. by the Mediterranean; its eastern frontier extends to Armenia and the Euphrates. It is one of the most celebrated countries mentioned in ancient history, and contained many famous cities, which are now mostly in ruins. *See* REMARKS, page 258.

Asphalti'tes, Lake. *See* **Dead Sea.**

Astrabad', a city of Persia, the capital of the province of the same name, near the Caspian. Pop. 20,000.

Azerbijan' (fire-keeper), a province of Persia, bounded on the N. by the Aras or Araxes. Pop. estimated at 1,500,000.

Baalbec, *bâl'bek*, ancient *Heliopolis* (city of the sun), a city of Syria, now a decayed village, is situated in a fertile valley near the foot of Anti-Libanus. Here are the magnificent ruins of a "Temple of the Sun," supposed to have been built by Antoninus Pius.

Ba'ba, Cape, the most westerly point of Asia Minor, near the entrance of the Dardanelles.—39, 29 N. 26, 4 E.

Babelman'deb, Strait of (the gate of tears), a channel about 20 miles broad, uniting the Red Sea with the Indian Ocean.

Bagdad' (the garden of justice), the capital of an eyalet of the same name in Asiatic Turkey, situated on the Tigris. This celebrated city, founded A.D. 763, was the capital of the Saracen empire, and the principal seat of Mohammedan learning till the 13th century, when it was taken and sacked by a grandson of Gengis Khan. Pop. about 150,000.—33, 19 N. 44, 24 E.

Bahrein, *bâ-rain'*, a cluster of islands on the S.W. side of the Persian Gulf, near the coast of Arabia. The pearl-fishery here is one of the most valuable in the world. Pop. 68,000.

Baktegan', a large salt lake in the province of Fars, Persia. *See* REMARKS, page 262.

Balfrush, *bâl-froosh'* (corruption from *Barfurush*, the mart of burdens), a town of Persia, province of Mazanderan, near the Caspian, with a considerable trade. Pop. 10,000.

Bas'sorah, or Bas'ra, or Bussorah, *boos'so-râ* (Arab. a margin), a frontier city and river-port of Asiatic Turkey, on the Shat-el-Arab, 70 miles from its mouth in the Persian Gulf. Pop. 40,000.

Bayazid, *bi-ă-zeed'*, a town of Armenia, near the base of Mount Ararat. Pop. 5000.

Beyrout, *bā'root* (from Heb. *beroth*, wells, or from the Phœnician deity *Baal Beerith*, lord of wells), a fortified seaport of Syria, on an extensive bay of the Mediterranean. Pop. 80,000.

Bir, *beer* (a well), a walled town of Asiatic Turkey, on the Euphrates. Pop. 8000.

Bitlis', an ancient city of Asiatic Turkey, S.W. of Lake Van. Pop. 30,000.

Boli, *bo'le*, a town of Anatolia, in Asiatic Turkey. Pop. 10,000.

Boodroom, or Boudroom, *bo-droom'*, supposed to be the ancient *Halicarnassus*, a seaport town of Anatolia, Asia Minor. Pop. about 11,000.

Brusa, or Broussa, *broo'sâ*, anciently *Prusa ad Olympum*, a city of Anatolia, Asia Minor, capital of a sanjak, at the foot of Mount Olympus. Pop. 80,000.

Bushire, *boo-sheer'*, properly **Abu-Shehr** (the father of cities), a seaport city of Persia, on the Persian Gulf, an emporium of the trade with India. Pop. 18,000.

Carama'nia, or Karama'nia, an extensive region of Asiatic Turkey, E. of Anatolia, watered by the rivers Sihun and Kizil Irmak. The surface is mountainous, but intersected with fertile valleys. Pop. about 2,500,000.

Casbin, or Kasbin, *kâz'bin* or *kas-been'*, a fortified town of Irak-Ajemi, Persia, with a considerable trade. Pop. 25,000.

Cy'prus (most probably named from a shrub, called by the Greeks *kupros*, with which the island abounded, but other etymologies are also given), an island in the Mediterranean, off the coast of Asia Minor, belonging to Turkey, but under British administration. It is 140 miles in length by 50 miles in breadth, and is traversed from E. to W. by two lofty chains of mountains. In ancient times it was celebrated for its fertility and beauty. Its fruits, particularly grapes, still preserve their pre-eminence. The capital is *Lefkosia*, or *Nicosia*, near the centre of the island. Area 3678 square miles; pop. 186,000.

Damar', a town of Arabia, province of Yemen, 60 miles S.E. of Sana.

Damas'cus, a very ancient city of Syria, in Asiatic Turkey, situated in a beautiful plain at the E. base of Anti-Libanus. Being on the route of the great caravans to Mecca, it is the centre of an extensive trade. It was formerly famous for its manufacture of

sabres; and it has given the name of *damask* to figured silk and other textures. *Beyrout* is the port of Damascus. Pop. 150,000.—33, 27 N. 36, 25 E.

Dead Sea, or Lake Asphalti'tes (so called from the sulphurous and bituminous matter with which its waters are impregnated), Arab. *Bahr el Lout* (Sea of Lot), a lake of Palestine, in the vicinity of which stood the four Cities of the Plain which were destroyed by fire from heaven in the days of Lot. Its average length from N. to S. is about 46 miles; its breadth from 10 to 12 miles; area 360 square miles. It is also called the *Salt Sea*, from its water containing eight times more saline matter than that of the ocean; and on that account only the lowest forms of animal life can exist in it. The lake receives a number of streams, the principal being the Jordan, which flows into it at its northern extremity; but having no outlet, the inflowing waters are discharged by evaporation. Its surface is 1292 feet below that of the Mediterranean, and thus it is the deepest fissure on the face of the earth at present known.

Derayeh, El, *el dâ-ri'eh*, a town of Arabia, formerly capital of the country of the Wahabees, nearly in the centre of Nejd. Pop. 15,000.

Diarbekir (the dwellings or tents of Bekr, from Arab. *diyár*, dwellings, and *Bakr*, the name of an Arabian tribe), a town of Asiatic Turkey, capital of a pashalic of the same name, near the right bank of the Tigris; it has some silk and cotton manufactures, but its trade has suffered greatly from the Kurds, who plunder the caravans. Pop. estimated at 60,000.—37, 55 N. 39, 53 E.

Dizful, Dizfoul, or Dezfool, *dez-fool'*, a city of Persia, province of Khuzistan, on the river of the same name. Pop. about 15,000.

Elburz, *el'boorz*, a range of mountains in Persia, of which the *Demavend Peak* is 21,500 feet high. Also the name of the highest peak of the Caucasus.

El-Ha'sa, or Lahsa, a Turkish province of Arabia, lying along half of the W. shore of the Persian Gulf. *See* REMARKS, page 258.

El-Katif, or El-Khatif, *el-kâ-teef'*, a seaport of the Turkish province of El-Hasa, Arabia, on a bay in the Persian Gulf. Pop. 6000.

Elwund', a range of mountains in Persia.

Erzroum', or Erzeroum (corruption from *Arz-er-Roum*, the fortress of the Romans), the capital of Turkish Armenia, near the N. source of the Euphrates; it stands on a beautiful plain 6000 feet above the sea. Pop. 60,000.

Euphrates, *u-frā'tēz* (from Greek *euphraino*, to gladden, in allusion to the beneficial effects of its inundations), called by the Arabs *Furât* (sweet water, its water being of a very pleasant taste), a celebrated river of Asia, rises in the mountains of Armenia. After a course of 1600 miles, it receives the Tigris above Bassorah. The united stream, under the name of the *Shat-el-Arab*, falls into the Persian Gulf by several mouths. Its whole course is about 1700 miles.

Fars, or Farsistan', ancient *Persis*, a province of Persia, E. of Khuzistan, and N. of the Persian Gulf. Pop. estimated at 1,700,000.

Ga'za, now called **Gazara** (corruption from Arab. *khazan*, a treasury), a city of Palestine, 48 miles S.W. of Jerusalem, about 3 miles from the coast of the Mediterranean; it has a pop. estimated at 15,000 or 16,000. The ancient city of *Gaza* occupied a site nearer the sea.

Ghilan, *ghe-lan'*, a province of Persia, extending 120 miles along the S.W. shore of the Caspian.—Chief town, *Resht*.

Gombroon, Gombrun, *gom-broon'*, or **Bun'der Ab'bas** (port of Abbas), a seaport of Persia, province Kerman, on a bay of the Gulf of Ormuz; it was formerly, and is still, a place of great trade. Pop. 5000.

Hadramaut, *hâ-drâ-mout'*, Arab. pron. *hâ-drâ-mâ-oot'*, a province of Arabia, stretching along the southern coast from Oman to Yemen, with which latter province it constituted the ancient *Arabia Felix*. *See* REMARKS, page 261.

Hamadan', a commercial city of Irak-Ajemi, Persia, supposed to occupy the site of the ancient *Ecbatana*. It is meanly built and partly in ruins, but noted for leather, in which it carries on a considerable trade. Pop. 30,000.

Ham'ah, or Ham'mah, *hâm'mâ*, ancient *Epiphania*, and the *Hamath* of Scripture, a city of Syria, situated on both banks of the Orontes, 110 miles N.E. of Damascus. Pop. est. at 30,000.

Hamoon', ancient *Aria Palus*, a lake or large morass in the E. of Persia, into which flows the river

Helmund; its length is about 70 miles and its breadth from 15 to 20 miles.

Hedjaz, El, *el hej-az'*, or **Hejaz** (the land of pilgrimage), a Turkish province of Arabia, extending along the Red Sea from Mount Sinai to the frontier of Yemen. *See* page 260.

Hil'lah, a town of Irak-Arabi, in Asiatic Turkey, on the banks of the Euphrates. It stands near the site of the ancient *Babylon*, the remains of which, consisting of vast masses of ruins and bricks, are still to be seen in the vicinity. Pop. 10,000.

Homs, *hōmz*, ancient *Emesa*, a city of Syria, 86 miles N.N.E. of Damascus, with manufactures of gold and silver thread, cotton, woollen, and silk fabrics. Pop. estimated at 15,000.

Ho'reb, Mount (the desert), a mountain of Arabia, N.W. from Mount Sinai, celebrated in sacred history as containing the rock from which, when struck by Moses, water issued to relieve the thirst of the Israelites.

I'da, a mountain of Asia Minor, 5292 feet high, opposite the entrance of the Dardanelles.

Irak, or **Irak-Ajemi**, *e-rāk' aj'ē-me* (Irak of the Persians, in reference to Irak-Arabi), the most important province of Persia, in which is embraced the ancient *Media.*

Irak'-Ar'abi (Irak of the Arabs, in reference to the above), ancient *Chaldæa*, a province of Asiatic Turkey, comprehended in the modern pashalic of Bagdad. It is watered by the Euphrates and the Tigris.

Iran, *e-ran'*, the name by which Persia is known to the natives. *See* REMARKS, page 262.

Ispahan', or **Isfahan'**, a city of Persia, province Irak-Ajemi, till 1770 the capital of Persia. Pop. 60,000.

Jab'bok, a river of Syria, rises in the Jebel Hauran, and flows westward into the Jordan.

Jaf'fa, or **Yaf'a**, ancient *Joppa* (beauty), a maritime town of Palestine, on a tongue of land projecting into the Mediterranean. Pop. 12,000.

Jer'icho, a city of Palestine, of which frequent mention is made in Scripture. It is now represented by the small village of *Riha*, 18 miles E.N.E. of Jerusalem.

Jeru'salem (abode of peace), a city of Palestine, the celebrated capital of ancient Judea, situated on the declivity of a hill, at the extremity of an extensive plain, and comprised in the Turkish pashalic of Sidon. The splendour of its first and second temples, the destruction of the city by Titus, and the dispersion of the Jews by Adrian, are events known to every reader of history. The recovery of Jerusalem and the Holy Land from the Saracens was the great object of the Crusaders. It was taken, in 1099, by Godfrey of Bouillon, who was created King of Jerusalem, and retaken by Saladin in 1187. Pop. about 28,000, of whom one-fourth are Christians.—31, 47 N. 35, 13 E.

Jid'dah, a seaport of Arabia, on the coast of the Red Sea. It is a place of great trade, and may be considered the port of Mecca. Pop. about 22,000.

Jor'dan (from Hebrew *yar'dén*, the flowing, or the river), Arab. *Esh-sheri'ah* (the watering-place), a celebrated river of Palestine. Issuing from Mount Hermon, a branch of Anti-Libanus, it forms, with some other streams, the small lake Merom. Passing afterwards through the great lake called the Sea of Tiberias, and then flowing through an extensive plain, it falls into the Dead Sea.

Kaisariyeh, Kaisariah, or **Kisariah**, *ki-zār-e'ā*, ancient *Cæsarea*, a town of Caramania, Asia Minor, on the S. side of a fertile plain, watered by the Kara-su, at the N. foot of Mount Erjish, 160 miles E.N.E. of Konieh. Pop. 25,000.

Kara'-Hissar' (the black castle), a town of Asia Minor, 30 miles S.W. of Kaisariyeh, on the slope of a hill crowned by a ruined castle.

Karak', a small rocky island belonging to the British, in the Persian Gulf.

Kastamou'ni, a town of Anatolia, Asia Minor, on the Kara-su, 114 miles N.N.E. of Angora. Pop. 40,000.

Kerbela, *ker-bā'lā*, or **Meshed Hossein**, *mesh-ed' hos-sain'*, a town of Irak-Arabi in Asiatic Turkey, near the Euphrates, with which it is connected by a canal. The inhabitants are chiefly Persians, with whom it is a holy city. Pop. 25,000.

Kerini'a, or **Keryni'a**, a town on the N. shore of the island of Cyprus, 14 miles from Nicosia. Pop. 13,319.

Kerman', or **Kirman'**, ancient *Carmania*, a province of Persia, E. of Fars; it is mostly mountainous, interspersed with extensive tracts of desert, and the climate is unhealthy. Pop. 300,000. —The capital, of the same name, was once a place of great importance, but, having been taken by Aga Mohammed in 1794, it has never recovered its splendour. Pop. 42,000.

Kermanshah′, ancient *Choaspes*, a town of Persia, near the Kerkah, on the great south road from Persia into Asiatic Turkey. Pop. 30,000.

Khorasan′, or **Khorassan′** (the country of the sun), an extensive province of Persia, now divided between the Shah of Persia and the Afghans. The great Salt Desert occupies the larger part of it. Area estimated at 200,000 square miles; pop. 855,000.

Khuzistan′ (originally *Khoristan*, the country of *khors* or estuaries, so called from there being many estuaries on that part which borders the Persian Gulf), ancient *Susiana*, a province of Persia, bounded N. by the Bakhtiyari Mountains; E. by Fars; S. by the Persian Gulf; and W. by the pashalic of Bagdad. Area estimated at 25,677 square miles.

Kishm, or **Kish′ma**, an island at the entrance of the Persian Gulf. Pop. 5000.—26, 57 N. 56, 50 E.

Kiz′il-Ir′mak (red river), ancient *Halys*, a river of Asia Minor, which issues from Mount Taurus, and, after a course of 500 miles, flows into the Black Sea.

Kiz′il-Ouzen′ (so called from the reddish tinge of its waters, *kizil* meaning "red"), ancient *Mardus*, a river of Persia, which rises in Diarbekir, and, after a winding course of 300 miles, falls into the Caspian Sea near Resht.

Ko′nieh, ancient *Iconium*, the chief city of Caramania, in Asia Minor, with some manufactures of carpets and leather, 27 miles S.E. of Smyrna. Pop. 50,000.

Kos, ancient *Cos*, an island belonging to Turkey, near the Asiatic coast. It is celebrated as the birthplace of Hippocrates the physician and Apelles the painter.

Kurdistan, or **Koordistan**, *koor-dis-tän′* (the country of the Koords), a rude and mountainous region of W. Asia, belonging partly to Asiatic Turkey and partly to Persia, between 34° and 38° N. lat., and 42° and 47° E. long. Pop. 2,000,000. The Koords were known to the ancients by the name of Carduchi. Under the ancient Persian monarchy they were included partly in the province of Assyria, and partly in that of Media.

Kurum, *koo-room′*, or **Karun**, *kä-roon′*, a river of Persia, rises in the province of Irak-Ajemi, and, after a course of 240 miles, enters the Persian Gulf by several mouths.

Kutaya, or Kutaiah, *koo-ti′yeh*, a town of Anatolia, Asia Minor, on a tributary of the Sakaria. Pop. estimated at 60,000.

Lar, the capital of Laristan, a province of Persia. Pop. 12,000.

Laristan′, a province of Persia, bordering on the Persian Gulf.

Latakia, *lä-tä-ke′a* (corruption from *Laodicea*), a seaport of Syria, with some interesting remains of antiquity, on the Mediterranean, 75 miles N. of Tripoli. Pop. about 12,000.

Leb′anon, or **Lib′anus** (the white mountain), a chain of mountains in Syria and the N. of Palestine. The loftiest summit is 10,050 feet in height, and capped with snow; but up to 6000 feet every available spot of the range is cultivated with fig-trees, olives, mulberry-trees, and vines. Very few of the cedars for which Lebanon was famous now remain.

Lefkosia, *lef-ko-ze′ä*, or **Nicosia**, *ne-ko-ze′ä*, the capital of the island of Cyprus, near its centre. Pop. 56,081.

Les′bos, or **Mytile′nē**, a large island belonging to Turkey, near the coast of Asia Minor, celebrated in antiquity as the birthplace of Sappho, Alcæus, and Theophrastus; and, in the early part of the 16th century, of the brothers Barbarossa, noted in the maritime history of Europe. Pop. 40,000.—39, 15 N. 26, 20 E.

Levant′, The (the place of the sun-rising as seen from Italy), the eastern part of the Mediterranean Sea.

Lüristan′, a province of Persia, inhabited by a savage and fearless race.

Manisa, *mä-ne′sä*, or **Manissa**, *mä-nis′sä*, ancient *Magnesia ad Sipylum*, a city of Anatolia, Asia Minor, near the Sarabat; it is famous for its saffron groves. Pop. estimated at 80,000, 50,000 of whom are Jews.

Ma′ragha, a walled city of Persia, province of Azerbijan, 50 miles S. of Tabriz. Pop. about 25,000.

Mazanderan′, a province of N. Persia, between the S. shore of the Caspian and the Elburz Mountains. It produces silk, cotton, fruits, and rice. Pop. estimated at 300,000.

Mec′ca, a city of Arabia, the capital of the province of Hedjaz, situated in a narrow valley on the Red Sea, 51 miles E. of Jiddah. It is celebrated as the birthplace of Mohammed in 569, and is venerated by the Mussulmans as their Holy City. It contains a spacious temple, in the centre of which is the *Kaaba* or shrine of the Prophet. Mecca is still the annual resort of numerous

pilgrims. Pop. 45,000.—21, 28 N. 40, 15 E.

Medina, *med-e'nȧ* (the city), a city of Arabia, province of Hedjaz, on the border of the Desert, about 250 miles N. of Mecca; it is held sacred by the Mussulmans as containing the tomb of Mohammed. Pop. 15,000.

Men'dereh, Mender, or **Meinder,** ancient *Mæander,* a river of Anatolia, Asia Minor, flows S.W. till, after a course of 200 miles, it enters the Archipelago.—Also a river of Anatolia, ancient *Simois,* rises in Mount Ida, flows N.N.W., and enters the Strait of the Dardanelles.

Mesh'ed, or **Mush'ed,** a fortified city of Persia, the capital of Khorassan, situated in a fine plain, about 12 miles from the ruins of the ancient city of Tonse; it has woollen, cotton, and hardware manufactures, and, as containing the tomb of Imaum Riza, a follower of Ali, is considered a holy city, and is a great place of pilgrimage. The shrine is visited by about 30,000 pilgrims annually, and the mosque is the richest in the world.—36, 18 N. 59, 25 E.

Mo'cha, a city of Turkish Arabia, province of Yemen, on the Red Sea; it is the port of *Sana,* the most important inland town of Yemen. From Mocha much Yemen coffee was at one time exported, but most of that trade has been transferred to Aden. Pop. 6000.—13, 20 N. 43, 12 E.

Mo'sul, a city of Asiatic Turkey, on the W. bank of the Tigris, nearly opposite the site of the ancient *Nineveh.* It was formerly famous for the manufacture of muslins, which derived their name (*mosuline*) from this town. On the E. bank of the river many interesting remains of Nineveh have been discovered. Pop. 75,000.

Mu'sa Jebel, *moo'sȧ jeb'el* (Moses' mount), a mountain of Arabia Petræa, between the arms of the Red Sea; it is the *Sinai* of Scripture, and is 7375 feet above the sea.

Muscat', a strongly fortified seaport of Arabia, the capital of Oman, near the entrance of the Persian Gulf. It is a place of great trade. Pop. 20,000.—23, 37 N. 58, 38 E.

Mussendom', Cape, a bold promontory of Arabia, at the entrance of the Persian Gulf.—26, 24 N. 56, 34 E.

Mut'tra, a populous town of Oman, Arabia, 3 miles S.W. of Muscat.

Nablous, *nȧ-bloos'* (new city), a city of Palestine, in a fertile valley, near the site of the ancient *Shechem,* 33 miles N. of Jerusalem. Pop. 8000.

Ned'jed, or **Nejd** (elevated country), the largest division of Arabia, including nearly all its central parts, and consisting chiefly of a high table-land, interspersed with rude pastoral valleys. It is the country of the Wahabees. Pop. 1,400,000, exclusive of about 200,000 Bedouins, who are subject to the ruler of Nedjed. *See* REMARKS, page 260.

Nishapoor, or **Nishapur,** *nish-ȧ-poor',* a city of Persia, province of Khorassan, in a fine valley, 50 miles from Mushed. Pop. 8000.

Olympus, a mountain of Asia Minor, 9000 feet high, 8 miles S.W. of Brusa.—Also a mountain range in the island of Cyprus.

Oman', a division of Arabia, extending along the E. coast from Cape Ras al Had to Cape Mussendom, at the entrance of the Persian Gulf.

Orfa, Orfah, *or'fȧ,* or **Oorfa,** *oor'fȧ,* a city of Algezira, in Asiatic Turkey, 78 miles S.W. of Diarbekir; it is the *Edessa* of the Greeks and Romans, and supposed to be the *Ur of the Chaldees* mentioned in Scripture. It has manufactures of cotton goods, etc., and a large trade in corn. Pop. estimated at 30,000.

Or'muz, a small island at the entrance of the Persian Gulf, formerly one of the richest commercial centres in the East.

Oron'tes, *Arab.* **El Aa'sy** (the rebellious), a river of Syria, Turkey in Asia, issues from Mount Lebanon, N. of Damascus, passes Antioch, and falls into the Mediterranean. Its modern name is *Nahr-el-Asi.*

Pal'estine (the land of the Philistines), or the **Holy Land,** the ancient country of the Israelites, and the theatre of the great events of the Mosaic and Christian dispensations. It is bounded on the W. by the Mediterranean Sea, and on the N. by Syria. Its greatest length is 200 miles; its breadth 100 miles. Although a mountainous country, it displays in general a luxuriant fertility corresponding to the descriptions of the "promised land." It was divided by the Romans into four provinces: *Judea,* in the S., formerly possessed by the tribes of Judah, Benjamin, Dan, and Simeon; *Samaria,* in the middle, by the tribe of Ephraim and part of the tribe of Manasseh; *Galilee,* in the N., by the tribes of Asher, Naphtali, Zebulun, and Issachar; and *Peræa,* on the E. of the Jordan, by the

tribes of Reuben, Gad, and the other part of the tribe of Manasseh. It is now a part of the Turkish or Ottoman Empire.

Palmy'ra (the city of palms), the *Tadmor* of Scripture, a ruined city of Turkey in Asia, in an oasis of the desert of Syria; its remains occupy a space of 3 square miles, and still attest by their magnificence its former wealth and splendour.—34, 18 N. 38, 13 E.

Pat'mos, now called **Patino**, a small island near the coast of Asia Minor, about 20 miles S. of Samos, noted as the place where St John wrote the Apocalypse. Pop. 4000.

Per'gamos, or **Ber'gamo**, a city of Asia Minor, on the Caicus, once the capital of a powerful kingdom, and one of the seven churches of Asia mentioned in the Book of Revelation. Pop. 10,000.

Persian Gulf, an arm of the Indian Ocean, separating Persia from Arabia.

Ras al Had, a cape forming the extreme E. point of Arabia.—22, 33 N. 59, 56 E.

Ras-el-Khyma, *râs-el-ke'mâ*, a fortified town of Arabia, on the Persian Gulf, formerly a great resort of pirates.

Red Sea, or **Arabian Gulf**, a branch of the Indian Ocean, separating Arabia from Africa. It extends above 1400 miles from the Straits of Babelmandeb to the Isthmus of Suez, at the W. head of the Gulf, where it reaches to within 60 miles of the Mediterranean, with which it is now united by the Suez Canal. Its greatest breadth is about 230 miles. It abounds with coral reefs, within which, at certain seasons of the year, are found myriads of microscopic animals of a blood-red colour, from which its name may probably be derived, though some believe the name to be a translation of the "Sea of Edom." Owing to the prevalence of violent winds, and by reason of numerous shoals and sandbanks, its navigation is intricate and dangerous.

Reshd, or **Resht**, a town of Persia, the capital of the province of Ghilan, in a low and unhealthy situation, on the Caspian Sea, 18 miles S.E. of its port, Enzelli; it carries on a considerable trade in silk embroideries, gallnuts, and fruits. Pop. 27,500.—37, 15 N. 49, 40 E.

Rhodes, *rodz*, an island belonging to Turkey, in the Mediterranean, near the Asiatic coast. In ancient times it was celebrated for its colossal brazen statue, one of the seven wonders of the world, erected B.C. 288, and thrown down by an earthquake B.C. 227. Pop. 35,000. The chief city is a seaport of the same name, situated at the N.E. extremity of the island; it is strongly fortified, and has some trade in the fishing and exporting of sponge. Pop. 20,000, of whom 3000 are Jews.

Riadh, *re'âd*, a town in the interior of Nedjd, Arabia, the capital of the Wahabees, a very strict sect of Mohammedans.

Ros'tak, a large inland town of S. Arabia, near the Jebel Akdar; its environs are noted for their fertility.

Saida, *si'dâ*, ancient *Sidon* (fish town), a town of Syria, on the N. side of a steep promontory which stretches S.W. into the Mediterranean. Pop. 6000.

Sakaria, Sakareeyah, or **Sakariyah**, *sâ-kâ-re'yâ*, ancient *Sangarius*, a river of Anatolia, Asia Minor, rises in the mountains S. of Angora, and falls into the Black Sea.

Sa'mos (the lofty), an island of Asiatic Turkey, separated from the coast of Asia Minor by a narrow strait. It still retains its ancient celebrity for beauty, fertility, and the excellence of its fruits. Pop. 36,465.

Sa'na, the capital of Yemen, in Turkish Arabia, with a great trade in coffee. Pop. 40,000.

Sarabat', ancient *Hermus*, a river of Anatolia, Asia Minor, flows S.W., then W.N.W., and falls into the Gulf of Smyrna, after a course of 200 miles.

Sari, or **Saree**, *sâ-re'*, a town of Persia, the capital of the province of Mazanderan, 24 miles E. of Balfrush. Pop. 35,000.

Scanderoon', Iskanderun, *is-kân-der-oon'* (named after Alexander the Great, whose Turkish name was *Iskander*), or **Alexandretta**, *al-ex-an-dret'ta* (little Alexandria), a town of Syria, Turkey in Asia, the port of Aleppo, on a gulf of the Mediterranean.—36, 35 N. 36, 8 E.

Scarpan'to, ancient *Carpathos*, an island in the Mediterranean, between Candia and Rhodes; it is 30 miles long, 8 miles broad, and at its N. extremity is the village of *Scarpanto*.

Scio, *she'o*, or *si'o*, also written **Chio** or **Khio**, ancient *Chios*, an island belonging to Turkey off the W. coast of Asia Minor. Area 508 square miles. The capital is of the same name, and is situated on a shallow bay on the E. coast. It suffered very severely from a series of earthquakes in 1881.

Scu'tari, called by the Turks Iskudar, ancient *Chrysopolis*, a city of Asiatic Turkey, on the Bosporus, opposite Constantinople. Pop. estimated at 60,000.

Seevas, or **Sivas**, *se'vâs*, a town of Asiatic Turkey, situated in an extensive plain, near the source of the Kizil Irmak, about 60 miles S.S.E. of Tokat. Pop. about 25,000.

Sefid-Rud, *sef'eed-rood* (white river), a river of N. Persia, flows S.E., then N.E., and enters the Caspian Sea by several mouths 30 miles E. of Resht.

Seistan, *sās-tân'*, formerly a province of S.W. Afghanistan, now largely embraced in the Persian province of Khorassan. With the exception of the banks of the Helmund, it consists of arid plains, and contains the Hamoon Swamp or Seistan Lake. Pop. 50,000.

Ser'bal, Jeb'el, a mountain of Arabia, N.W. of Mount Sinai, 6760 feet high.

Sert, a walled town of Turkish Armenia, near the Khabar. Pop. 5000.

Shat-el-Arab (the river of the Arabs). *See* **Euphrates.**

Shiraz, *she-râz'*, a city of Persia, the capital of Farsistan, beautifully situated amid fine gardens, 116 miles E.N.E. of Bushire; it has an extensive commerce and manufactures of silks, sword-blades, earthenware, etc. Hafiz, the Persian poet, was born here about the year 1320. Pop. 40,000.—29, 37 N. 52, 44 E.

Shuster, *shoos'ter*, a city of Persia, the capital of Khuzistan, on the Karoon, 30 miles E.S.E. of Dizfool. Pop. estimated at 8000.—32, 0 N. 49, 0 E.

Sinai, *si'nā*, a mountain of Arabia, near the head of the Red Sea, in the peninsula between the Gulf of Suez and the Gulf of Akabah. It is generally identified with the *Jebel Musa*, or Mount of Moses. *See* **Musa, Jebel.**

Sin'na, Sen'na, or **Sined'rij**, a town of Persia, province of Irak-Ajemi, the capital of the district of Ardelan, 75 miles N.N.E. of Kermanshah; it contains 4000 or 5000 families, and has an imposing appearance.

Sinope, *sin'o-pe*, a seaport of Anatolia, Asia Minor, on the Black Sea; it was bombarded and nearly destroyed by the Russians in 1853. It is celebrated as the birthplace of Diogenes, the famous cynic philosopher, 412 B.C. Pop. 12,000.

Sivas. *See* **Seevas.**

Smyr'na (from a Greek word signifying "myrrh," for which it was formerly celebrated), an ancient city and seaport of Asia Minor, on a gulf of the same name in the Archipelago; it is a place of great trade, and claims the honour of being the birthplace of Homer. Pop. estimated at 160,000.—38, 26 N. 27, 9 E.

Sour, *soor*, a small seaport of Syria, Turkey in Asia; it occupies the site of ancient *Tyre*, once a great commercial city. Pop. 3500.

Syr'ia, a province of Asiatic Turkey, lying along the E. coast of the Mediterranean. Area nearly 50,000 square miles; pop. estimated at 2,750,000.

Tabaria, or **Tabareeyah**, *tâb-â-ree'yă*, anc. *Tiberias*, a city of Palestine, on the W. shore of the Lake of Tiberias or Sea of Galilee.

Ta'bor (*Arab.* **Jebel Tur**), a mountain of Palestine, 8 miles S.E. of Nazareth, supposed at one time to have been the scene of our Lord's transfiguration.

Tabriz, or **Tabreez**, *tâ-breez'*, ancient *Taurus* (the mountain town), a city of Persia, the capital of Azerbijan, situated in the centre of a great plain, on the river Aigi, which runs into Lake Urumiah. Pop. 165,000.—38, 4 N. 46, 24 E.

Tadmor. *See* **Palmyra.**

Tar'sus, *Turk.* **Tersoos** (the strong), a city of Asia Minor, pashalic and 18 miles W.S.W. of Adana, on the Cydnus; it was the ancient capital of Galicia, and the birthplace of the Apostle Paul. Pop. 30,000.

Tau'rus (from Arab. *tawr*, a mountain, is the general name for a mountain range), a chain of lofty mountains in Asia Minor; the most elevated peak is 13,197 feet high.

Teheran, *tā-her-ân'*, or **Tehraun**, the capital of Persia, province of Irak-Ajemi. Pop. 100,000.—35, 42 N. 51, 20 E. *See* REMARKS, page 263.

Ten'edos, a small island off the W. coast of Asia Minor, 12 miles S.S.W. of the S.W. entrance of the Dardanelles; it produces excellent wine, cotton, corn, and fruits. According to Virgil, Tenedos was occupied by the Greeks when they retired from the siege of Troy. Pop. 7000.

Ti'gris, a large and rapid river of Asiatic Turkey, issues from the mountains of Armenia to the N. of Diarbekir, and, after pursuing a course of 800 miles nearly parallel to the Euphrates, joins with that river above Bassorah,

and the united stream is called *Shat-el-Arab.* *See* **Euphrates.**

Tokat', ancient *Iris*, a city of Asiatic Turkey, 58 miles N.W. of Sivas, on the Kizil-Irmak; it has silk and copper manufactures, and is a great depôt for agricultural produce. Pop. 30,000.

Treb'izond, ancient *Trapezus*, a city of Asiatic Turkey, the capital of the pashalic of the same name, on the S.E. coast of the Black Sea, 120 miles N.W. of Erzeroum; it is the most important Turkish seaport on the Black Sea, and is a depôt of merchandise destined for Armenia and Persia *viâ* Erzeroum, with which it is connected by railway. Pop. 45,000.

Tripoli, or **Tarablus**, *tâ-râ'bloos*, a seaport of Syria, Asiatic Turkey, on the Mediterranean, at the mouth of the Kadisha. It was called *Tripoli, i.e.,* "three cities," because originally it was a joint colony from the three cities Tyre, Sidon, and Aradus. Pop. 24,000. —34, 26 N. 35, 50 E.

Urumiah, *oo-roo-me'ă*, a lake of Persia, province Azerbijan, 70 m. long and 30 m. broad; it is so impregnated with salt that no fish can live in it, and large cakes, resembling a white pavement, are often found at the bottom.

Urumiah, a walled town of N. Persia, province of Azerbijan, in a plain 64 miles S.W. of Tabreez; it is the reputed birthplace of Zoroaster, and for many years was the sacred city of the fire-worshippers. Pop. est. at 50,000.

Van, a salt lake of Turkish Armenia, 70 miles in greatest length, and about 50 miles in greatest breadth. Area about 2000 square miles.

Van (so called from having been built by King *Van*), a strongly fortified city of Turkish Armenia, the capital of a pashalic of the same name, on the E. shore of the above lake. It is called by the natives *Shamiramakert, i.e., Semiramis-town.*

Xan'thus (from Gr. *zanthos*, yellow, probably named from its colour), a river of Asia Minor, rises in Mount Taurus, and falls into the Mediterranean near Patara.—Also, an ancient city on the above river, whose site and remains were first explored in 1838, 20 miles S.E. of Makri.

Yem'bo, or **Yam'bo**, a town of Hedjaz, Turkish Arabia, on the Red Sea, 130 miles S.W. of Medina, of which it is the port. Pop. 5000.

Yem'en (originally the country "on the right hand," but the same term was also used to signify "prosperous," and hence the country was known to the Romans as *Arabia Felix*, or Happy or Fortunate Arabia), a province of Asiatic Turkey, bordering upon the Red Sea, and bounded N. by Hedjaz; S. by the Gulf of Aden; and E. by Hadramaut. *Sana* is the capital.

Yezd, a city of Persia, capital of a province of the same name; it occupies an oasis in the great salt desert of the central country. Pop. 40,000, among whom are many Parsees, or fire-worshippers.

AFGHANISTAN

Is bounded N. by Russian territory; W. by Persia; S. by Beloochistan; E. by Kafiristan and India. It contains about 260,000 square miles, and a population of about 4,000,000.

Afghan territory is best divided for us with reference to its three principal towns:—

Towards Persia .... Herat.
Towards India............................Kabul, Kandahar.

Mountains.—Hindu Kush, Sulaiman, the Paropamisus.
Rivers.—Kabul, Helmund, Hari-Rud.

REMARKS.

Afghanistan extends from 28° 50′ to 37° 30′ N. lat., and from 61 to 74° 40′ E. long.

The principality of Badakshan, sloping northwards from the Hindu Kush along the Amoo Daria, and deemed by diplomatists Afghan territory, belongs physically to the same depression as Russian Central Asia. Afghanistan proper belongs to the same table-land as Persia. The main slope of the surface is south-westward along the principal river, the Helmund, to the salt swamp of Hamoon. The River Kabul, tributary to the Indus, is the only one whose waters reach the ocean.

In respect of surface, climate, and production, Afghanistan resembles Persia. In no country, it is said, is irrigation more skilfully applied, yet about four-fifths of the surface remains barren. The Afghans are a strong and brave people, preferring tillage and pasturage to mechanical and commercial pursuits. The Emir, like a feudal king, is powerless without the co-operation of local chiefs. His capital, KABUL, situated 6000 feet above the ocean-level, so that snow lies several feet deep in its streets for several months of winter, is built of sun-burnt brick. Twice it has been occupied by British troops: once after the destruction of a British army by the Afghans in the Khyber Pass in 1842, and again after the murder in 1879 of the British Resident, with his staff and escort. Almost the whole population of Afghanistan are Mohammedans, mostly of the Sunnite sect; and the schools, rarer than in most Mohammedan countries, aim at nothing beyond teaching to read the Koran. The political importance of Afghanistan is due to its situation between India and Asiatic Russia, and to the fact that all the conquerors of India from the land side have reached India by marching through it. The Emir is now subsidized by the Indian government.

EXERCISES.

What are the boundaries of Afghanistan? What is its extent in square miles? What is its population? What are its three principal towns? Name its mountains and rivers.

Between what degrees of latitude and longitude is Afghanistan situated? What are its length and breadth? What portion of it lies north of the Hindu Kush? Along what river does the main slope of Afghanistan proper lie? What one Afghan river sends water to the ocean? In what three respects does Afghanistan resemble Persia? Describe the Afghans. In what respect is the Emir like a feudal king? Describe his capital. Account for its severe winter though it be in the latitude of the Levant. On what two occasions has it been occupied by British troops? How far does the religion of the Afghans differ from that of the Persians? What gives to Afghanistan great political importance?

BELOOCHISTAN

Is bounded N. by Afghanistan; W. by Persia; S. by the Indian Ocean; E. by India. Its area is estimated at 100,000 square miles, and its population at 1,000,000.

REMARKS.

Beloochistan extends from 24° 50′ to 30° 20′ N. lat., and from 62° to 69° 18′ E. long.

Inland Beloochistan belongs to the same table-land as Afghanistan proper and inland Persia, and resembles them physically. The seaboard resembles that of Persia on the Persian Gulf. Religion and government are as in Afghanistan. The Khan of KELAT, a small town situated about 7000 feet above the ocean-level, is the sovereign. The Indian government subsidizes him, keeps an agent at Kelat, and holds the fort of Quettah, about 25 miles beyond the head of the Bolan pass.

EXERCISES.

What are the boundaries of Beloochistan? What is its estimated area? What is its population?

Between what degrees of latitude and longitude is it situated? What two countries form with it one table-land? What of its religion and government? Name the capital. By what means does the Indian government keep a hold on the country?

INDIA

Is bounded N. by Kafiristan and the Chinese Empire; W. by Afghanistan, Beloochistan, and the Indian Ocean; S. by the Indian Ocean; E. by Independent Burma and Siam. It contains an area estimated at 1,500,000 square miles, and a population of about 255,000,000.

The name Presidency is still popularly used in connexion with Bengal, Bombay, and Madras; but British India is now administratively divided into twelve provinces:—

	Chief Towns.
Two under Governors—	
Bombay with Sind	Bombay, Poona, Ahmedabad, Surat, Karachi.
Madras	Madras, Tanjur, Salem.
Three under Lieut.-Governors—	
Bengal	Calcutta, Patna, Dacca, Mungir, Murshidabad.
N.W. Provinces with Oudh	Benares, Mirzapur, Allahabad, Cawnpore, Lucknow, Farrukhabad, Agra.
Punjab	Delhi, Ludhiana, Lahore, Peshawar.
Four under Chief Commissioners—	
Central Provinces	Nagpur, Jabalpur.
Assam	Gauhati, Sylhet.
British Burma	Rangoon, Moulmein.
Andaman and Nicobar Islands	Port Blair, Camorta.

Three directly under the Governor-General—	Chief Towns.
Ajmer	Ajmer.
Berar	Akola, Ellichpur.
Curg	Merkara.
Great Feudatories—	
Nizam's Dominions	Haidarabad, Aurangabad.
Kashmir	Srinagar, Leh.
Marwar (Rajpootana)	Jodhpur.
Sindiah (Central India)	Gwalior.
Mysore	Mysore, Bangalore.
Chief Minor Feudatories—	
Bhopal (Central India)	Bhopal.
Holkar's (Central India)	Indore.
Kach (Bombay Province)	Bhuj.
Travancore (Madras Province)	Trevandrum.
Patiala (Punjab Province)	Patiala.
Gaikwar's (Gujerat)	Baroda.
Independent States—	
Nepal	Katmandu.
Bhutan	Tassisudon.
Portuguese Possessions	Goa.
French Possessions	Pondicherry.
Crown Colonies connected with India—	
Ceylon, with the Maldive and Laccadive Islands	Colombo, Point de Galle, Kandy.
Straits Settlements	Singapore, George Town, Malacca.

Islands.—Ceylon, Maldives and Laccadives, Andaman and Nicobars, Bombay with Elephanta and Salsette, Mergui Archipelago, Penang, Singapore.

Gulfs.—Kach, Kambay, Manaar; Bay of Bengal, Bay of Martaban.

Mountains.—Sulaiman, Himalaya, Patkai, Arakan Roma, Pegu Roma, Tenasserim Roma, Vindhya, Satpura, Eastern and Western Ghauts, Neilgherries.

Rivers.—Indus, Ganges, Brahmapootra, Nerbudda, Taptee, Mahanuddy, Godavery, Kistnah, Cavery, Lower Irrawadi, and Salween.

Strait.—Palk Strait.

Capes.—Monze, Comorin, Dondra-Head, Negrais, Victoria.

REMARKS.

Peninsular India extends from 8° 4′ to 36° N. lat., and from 66° to 97° E. long. Its length, from Cape Comorin to the Himalaya

Mountains, is about 1800 miles; its greatest breadth, from the Indus to the Brahmapootra, about 1500 miles.

The inland boundaries of India are lofty ranges containing few passes, and these of extreme difficulty. In the short intervals where natural bulwarks fail, as towards Burma and Siam, the boundary line is marked by pillars of masonry. The frontier ranges are all manifold, and contain independent tribes or states. For instance, ascending from the north-west corner of India towards the Hindu Kush, there is a little-known pagan country of lofty mountains and deep valleys, called Kafiristan by the Mohammedans, as being a land of Kafirs, *i.e.*, Unbelievers. In the Himalaya lie independent Nepal and Bhutan, and Sikkim. To the Patkai Mountains, again, on the Assam frontier, belong the feudatory states of Munipur and Tipperah. The tribes who occupy the Sulaiman ranges, like the Emir of Afghanistan and the Khan of Kelat, beyond them, are subsidized by the Indian government for the purpose of keeping open and safe the Kyber, Gomul, and Bolan passes. The foot of the Bolan pass proper in Beloochistan is now reached by railway from the Indus; and a branch of that railway goes to Sibi near the Afghan frontier of Beloochistan, with the view ultimately of extension to Kandahar.

Peninsular India consists of a great table-land and a great plain. The table-land is made up of the Deccan proper, a triangular region within the Neilgherries and the Ghauts; of the plateau of Malwa, formed by the Vindhya hills, in the north; and of an intermediate region, where the table-land is interrupted by the Nerbudda and Taptee valleys, and yet maintained by the Satpura range between them. The natural fertilizers of this great table-land are the S.W. and N.E. monsoons, which bring rain at different seasons; but the loftier western Ghauts receive and retain so much more moisture than the lower, less steep, and less continuous eastern Ghauts, that Malabar coast, at the base of the former, is evergreen, while Coromandel coast, at the base of the latter, is tawny for the most part, like Spain. The great plain is formed by the united basins of the Indus, Ganges, and lower Brahmapootra. Its summit-level, not quite 1000 feet above the ocean, lies where the Jumna tributary of the Ganges and the Sutlej tributary of the Indus approach each other. Uniformly low, the Indo-Gangetic plain is yet highly diversified. The Indus basin is, for the most part, a region of burning sands below the confluence of the Sutlej, the river itself shrinking in volume as it approaches the delta; above that confluence, it is well watered everywhere, and waves with luxuriant harvests. The Ganges basin is a granary of wheat in its upper half, and of rice in its lower half. The yearly inundation, due to summer rains and the melting of snow on the mountains, creates the same opportunity of rice culture on the lower Brahmapootra and Irrawadi as on the lower Ganges; and accordingly they also are granaries of rice. So favourable is the climate, that throughout India double harvests are the rule. In the Punjab,

for example, the spring crops are wheat, barley, and peas; the autumn crops, millet, maize, certain pulses, and sugar-cane.

The enormous extent and diversified character of India appear on even a slight consideration of its principal component parts. Bombay Province, for instance, is nearly as large as Spain and Portugal, and more populous; while Bombay city contains more inhabitants than Lisbon and Madrid together. Madras Province is nearly as large as Spain, and fully twice as populous. Bengal ranks with France in size, and contains nearly twice its population. Bengal gives name to the native tiger, which is hunted not only in the seaward portion of the Ganges delta called *Sundarbans*, but also in inland districts towards the Himalaya, particularly around Maldah and Purniah. The N.W. Provinces embrace an area nearly as large as Italy, and one-half more populous. The Punjab is both larger and more populous than Spain and Portugal. Its name, which means "Five Waters," is due to the five streams which water it, viz., the Jhelum, Chenab and Ravi, Bias and Sutlej, which all unite in the great tributary of the Indus called Panjnad, *i.e.*, "Five Rivers." The Central Provinces, Assam, and British Burma, are thinly peopled provinces; but in size they rank, the first with Italy, the second with England and Wales, the third with Great Britain. Assam may well grow tea, since the tea-shrub was found in it indigenous in 1826. British Burma consists of Pegu on the lower Irrawadi, and of two rich coast-lands, with teak-clad mountains behind, viz., Arakan north of it, and south of it Tenasserim. The Andaman and Nicobar Islands form a penal settlement, to which the life-convicts of all India are sent. The total number there at any one time approaches 10,000. Of the great feudatory states, both the Nizam's Dominions and Kashmir are nearly as large as Great Britain, though falling short of it, Kashmir especially, in point of population. The valley of Kashmir and its lakes are famed for beauty. The latter have been all the more noticed, because the lake is a natural feature conspicuously absent from India generally; sea-lakes, indeed, are common, as the Ran of Kach, the backwaters of the Malabar coast, and the lagoons of the Coromandel coast. The Maharajah of Kashmir's annual tribute is one horse, twelve shawl-goats, and three pair of shawls, which last are always forwarded to the Queen Empress. The Marwar and Sindiah states are each larger than Scotland, but inferior in population. Mysore, again, is more populous than Scotland, but inferior in size. Large and small, there are about 800 native states.

The supreme government in India consists of a viceroy and governor-general, representing the Queen as *Kaisar-i-Hind*, *i.e.*, Empress of India, assisted by a council of six members besides the commander-in-chief. The seat of the supreme government is Calcutta, on the left bank of the Hugli arm of the Ganges, forming one city with Howrah on the right bank. To keep the Hugli channel open, hourly observations are taken, and gigantic steam-dredgers work accordingly. The British quarter of Calcutta is

a city of brick palaces; the houses in the native quarter are some of brick and some of mud, but most of them are merely bamboo frames covered with mats, and all of them are mean, with gardens and tanks interspersed. Situated in the middle of a fertile delta, at the head of ocean navigation, and at the terminus of great railways, Calcutta has trade enough for its ten miles of quay frontage. During the hot season, the viceroy moves his court to Simla, a sanitarium near the headwaters of the Sutlej, elevated fully 7000 feet above the ocean-level. The government of India by the British is rendered possible by the inability of the inhabitants to govern themselves, through diversity of race, language, and religion. The great majority are Hindus, professing Brahminism, and of these about ten millions are Brahmans, *i.e.*, members of the sacerdotal caste. Mohammedans rank next in point of numbers; but a Mohammedan would not trust a Hindu, neither would a Brahman trust a Pariah or even a low-caste man. The material development of India under British rule is undoubted: witness the construction of canals and tanks, of roads and railways, and the consequent mitigation of famines; also the working of coal and iron mines. The canal mileage, not including the vast network of merely irrigating channels, amounts to 13,000 miles; and the railway mileage is approaching the same figure. Morally also British rule can show results in the abolition of *suttee;* in the diminution of infanticide, and self-immolation, as under the car of Juggernaut; in the multiplication of schools, and in the diffusion of European science.

The Portuguese possessions are on the sea-board of Bombay Province, viz., Goa, the Portuguese capital, with some territory; Daman, a small seaport; and Diu Island.

The French possessions are in Madras Province, excepting Chandernagore, in the Hugli district of Bengal. Pondicherry, on Coromandel coast, is the capital. The other stations in Madras Province are Yanaon, in the Godavery delta; Karakkal, in the Kaveri delta; and Mahé, on Malabar coast.

Ceylon forms, with the Maldive and Laccadive islands, a crown colony. It is mountainous and well-watered, with bright green shores, due to a fringe of cocoa-nut trees; the highest mountain is Adam's Peak, 7420 feet. The coffee-plantations have been a failure of late years, through some disease of the leaf. and now tea is being grown instead. The natives are Buddhists; but there is also a considerable population of Mohammedan Arabs, and of Hindus.

The Straits Settlements, also a crown colony, are situated in the Malay peninsula. They consist of Penang Island, with Wellesley Province on the mainland; Malacca on the mainland; and Singapore Island.

Outside the Straits Settlements, the Malay peninsula is mostly occupied by states given to mutual wars, and to piracy. Some of them are tributary to Siam. Perak, conterminous with Wellesley Province, is under British protection. Others are independent;

and of these the best organized state is Johore, at the extremity of the peninsula, opposite Singapore Island. The best teak in the world grows here; and the Maharajah of Johore has erected saw-mills with European machinery. Nature has endowed the whole Malay peninsula with a fine climate, a fertile soil, great mineral wealth, especially in tin, and forests of valuable timber, including ornamental woods and the gutta-percha tree.

EXERCISES.

Name the boundaries of India. What is its extent in square miles? What is its population? Into how many provinces is British India divided? Name the two which have governors, and the three which have lieut.-governors. How many are under chief commissioners? How many directly under the governor-general? Name and point out on the map the five great feudatory states. What two states are independent? Name the capitals of the French and Portuguese possessions respectively. What two crown colonies are connected with India? Where are Karachi, Bombay, Punah, Calcutta, Benares, Cawnpur, Lucknow, Delhi, Peshawar, Srinagar, Rangoon? etc. Name two islands connected with Bombay. Where are the gulfs of Manaar and Martaban? Name and trace the three Roma ranges. What two river-basins are separated by the Satpura Hills? Find on the map the four capes on the mainland.

Between what degrees of latitude and longitude is Peninsular India situated? What are its length and breadth? Where do mountains fail on the boundary-line, and how is the want of them supplied? At what part of the frontier does Kafiristan come in? Account for the name. What three states lie on the Himalayan frontier? What two states lie on the Assam frontier towards the Patkai Mountains? Name three passes through the Sulaiman Mountains? How are they kept open and safe? Which of them is reached by a railway from the Indus?

What ranges bound the Deccan proper? By what hills is the great table-land continued northward? How are the two monsoons distinguished? Which side of the Deccan is the more verdant? Where is the great plain? Where, and how high, is its summit-level? Describe the Indus below the confluence of the Sutlej. What grains are characteristic of the upper Ganges and of the lower Ganges respectively? What parts of India offer conditions favourable to rice culture? Describe the double harvest of India, by specifying the spring and autumn crops in the Punjab.

Compare Bombay Province with Spain and Portugal. Compare Bengal Province with France. Mention three haunts of the Bengal tiger. Compare the North-West Provinces with Italy. What is the difference between Punjab and Panjnad? Name the five streams of the Punjab. What of Assam tea? Name the three districts of British Burma. Which province is a penal settlement? Which two of the feudatory states are each nearly as large as Great Britain? Compare the lakes of Kashmir with those of India generally. Of what does the annual tribute from Kashmir consist? About how many native states are there altogether?

Describe the supreme government of India. Why may Calcutta be

called the capital of India? Describe it. How many miles of quay frontage has Calcutta, and how is the river kept clear? Where is the viceroy's court during the hot season? What prevents the inhabitants of India from governing themselves? Name the two prevailing religions. Which of them is professed by the great majority? What material benefits have resulted from British rule? What of the canal and railway mileage? What moral benefits have resulted from British rule?

Name the three Portuguese possessions, and their capital. In what province are they? In what province are the French possessions, excepting Chandernagore? Name their capital.

Describe the shores of Ceylon. What of its principal mountain? Why is tea being substituted for coffee on the plantations? What religion prevails among the natives? Name the three Straits Settlements. Describe the Malay peninsula. Describe the native states. Which of them is under British protection? What of the Maharajah of Johore?

DESCRIPTIVE TABLE.

Adam's Bridge, a series of sand-banks in the Gulf of Manaar, almost connecting India with the island of Ceylon.

Adam's Peak, a lofty mountain of pyramidal form near the centre of the island of Ceylon. Height, 7420 feet.

A'gra, a division, district, and city of the North-Western Provinces of British India, between the Jumna and the Ganges. The division embraces the districts of Muttra, Agra, Furruckabad, Mynpuri, Etawah, and Etah. The city is called by the Mohammedans **Akbarabad** (the city of Akbar, who made it his capital). It is situated on the right bank of the Jumna, and possesses the most superb mausoleum in the world, called the Taj Mahal, constructed of white marble inlaid with precious stones. This city was capital of the Mogul empire till 1647. Pop. 138,000.

Ah'medabad, a district in Gujerat, British India, at the head of the Gulf of Cambay.—The principal town is of the same name, and is situated on the river Sabarmati. Pop. 118,000.

Ahmednagar, *ä'mĕd-nug'gur*, a grain producing district of British India, Bombay Presidency. The chief city has the same name, and is situated on the Seena. It is surrounded by a thick wall-like hedge of cactus (prickly pear), about 20 feet high. Pop. 33,000.

Ajmer, or Ajmere, *aj-mēr'*, a province of British India, W. of Agra, and S. of Delhi, watered by the Chambal and the Bunass. Pop. 453,075.—The principal city, also called **Ajmer** (Aja's hill), is strongly fortified. Pop. 27,000.

Ak'yab, a district and seaport town in the division of Arakan, British Burma. Pop. of district, 359,706; of town, 32,200.

Allahabad, *äl-lä-hä-bäd'* (the city of Allah or God), a division, district, and city of British India, North-West Provinces, S. of Oudh and Agra, watered by the Ganges, the Jumna, and some inferior streams.—The capital is a strong fortress. It is situated at the junction of the Ganges and the Jumna. Pop. 150,378.

Almo'ra, the capital of Kumaon, a district in the North-West Provinces of British India, situated on the acclivity of a mountain. Pop. 6600.

Amherst, *am'erst*, a district and seaport town within the division of Tenasserim, British Burma, on the Gulf of Martaban. Pop. of district, 301,086; of town, 3200.

Amraoti, or Oomrawattee, *am-rä-woo'te*, or *oom-rä-wut'tee*, a district and city of Berar, India. Pop. of district, 575,328; of city, 23,410.

Amritsar, *am-rit'sur*, a division, district, and city of British India, Punjab.—The city is situated 36 miles E. from Lahore. It is the holy city of the Sikhs. Pop. 152,000.

Andaman' Islands, a group of four large and several small islands in the S.E. of the Bay of Bengal. They are mountainous, and abound in wood. The Indian Government has established a penal settlement here. Area 2700 square miles. Pop. 14,500.

Arakan', a division of British Burma, consisting of a strip of country extending 400 miles along the

eastern seaboard of the Bay of Bengal. It has an average breadth of 50 miles. Area, 14,526 square miles; pop. 587,518. —Chief town, **Akyab.**

Arakan, formerly the capital of the above province, on a river of the same name, about 40 miles from the sea. Pop. 6500.

Arcot′, North and **South**, two contiguous maritime districts of British India, presidency of Madras. Pop. of North Arcot, 2,015,278; of South Arcot, 1,755,817.—The city of **Arcot** is situated on the Palaur, and is the capital of North Arcot. Pop. 10,988.

Assam′, a province of British India, in the N.E. It is 400 miles long, with an average breadth of 50 miles. It is very fertile, and is watered by the Brahmapootra and other rivers. Here much attention is given to the cultivation of the tea-plant. Area, 53,384 square miles; pop. 4,908,276.

Attock′ (limit), a town and fortress in the Punjab, India, on the Indus. Pop. 2000.

Aurangabad, *o-rung′gä-bäd*, an old Mohammedan province of India, now divided among the Nizam's territory and the British districts of Poona, Ahmednagar, and Konkan.—The capital, also called **Aurangabad**, has a population of 50,000.

Badakhshan, or **Budukshan**, *bud-uk-shan′*, a territory of Central Asia, between the Hindu Kush Mountains and the River Oxus, forming a portion of Afghan Turkestan.—**Jeron**, on the Kokcha, is the chief town.

Balkh, *bälk*, a district of Afghan Turkestan, between the Kabul and the Oxus, extending about 250 miles from W. to E., and 120 miles from N. to S.—The town of the same name (ancient *Bactra*), once the capital of the province, occupied in former times a site of great extent; but the modern place is small and almost deserted.

Ban′da, or **Ban′dah**, a district and town of Allahabad, North-West Provinces, British India. Pop. of district, 700,000; of town, 28,000.

Bangalore, or **Bangalur**, *bang-gä-loor′*, a district and fortified town of India, province of Mysore. Pop. of district, 828,354; of town, 142,513.

Bardwan, or **Burdwan**, *burd-wän′*, a division, district, and town of Bengal, British India. Pop. of division, 7,385,840; of district, 1,391,730; of town, 33,000.

Bareilly, or Bareli, *bar-ā′le*, a district and city of British India, North-West Provinces. The city is the capital of Rohilkhand division. Pop. of district, 1,507,139; of city, 105,000.

Baro′da, a state (known as the Gaekwar's state) and city of Gujerat, India. Pop. of state, 2,185,000; of city, 101,818.

Behar, Bihar, or **Bahar**, *bä-har′*, a province of British India, under the jurisdiction of the Lieutenant-governor of Bengal. It has the two divisions of Patna and Bhagalpur, which are subdivided into ten districts. Pop. 22,000,000.—The city of the same name, so called from *bihar* (a monastery of Buddhists), is 35 miles S.E. of Patna. Pop. 45,000.

Benares, *ben-ä′rēz*, a division, district, and city of the North-West Provinces, British India. The division embraces the districts of Azimgurh, Mirzapoor, Benares, Ghazipoor, Gorakhpoor, and Basti. Pop. of division, 8,179,307; of district, 794,039. The city is situated on the N. bank of the Ganges. Pop. 207,570.

Bengal, *ben-gawl′* (from Sans. *Banga*, the original name of the country), a former presidency of British India, lying between 10° and 35° 50′ N. lat., and 69° 30′ and 98° 40′ E. long. The term "presidency of Bengal" is still in popular use, and embraces (1) the provinces under the administration of the Governor-General in Council, viz., Ajmer, Berar, and Coorg, the extent of which is 22,011 square miles, and the pop. 3,302,340; (2) the territories under the Lieutenant-governor of Bengal, comprising an area of 155,997 square miles, and a pop. of 66,530,127; (3) the territories under the rule of the Lieutenant-governor of the North-West Provinces, including Oudh, extending to 105,961 square miles, with a population of 44,107,061; (4) the territories under the Lieutenant-governor of the Punjab, having an area of 107,010 square miles, and a pop. of 18,850,437; (5) the territories under the Chief Commissioner of the Central Provinces, the extent of which is 84,208 square miles, and the pop. 9,805,149; (6) the territories under the administration of the Chief Commissioner of British Burma, comprehending an area of 87,220 square miles, with a pop. numbering 3,707,646.

Bengal, Bay of, a part of the Indian Ocean, washing the E. shores of India and the W. shores of the Indo-Chinese Peninsula.

Bhagalpore, or **Bhagalpur**, *bä-gl-*

poor', a division and district of the province Behar, British India. Pop. of division, 7,974,608; of district, 1,923,276. —The chief town, also named **Bhagalpur** (the abode of refugees), stands on the right bank of the Ganges. Pop. 70,000.

Bhandara, *b'hăn-dă'ră*, a district and town of the Central Provinces, British India. Pop. of district, 680,000; of town, 12,500.

Bhawalpore, or Bahawalpur, *bă-wul-poor'*, a native state of North-West India, under British management. The Sutlej and the Indus separate it from the Punjab. Pop. 935,000.

Bhiwani, *bē-wă-ne'*, a town of India, division Hissar, province Oudh. Pop. 33,800.

Bhooj or Bhuj, *b'hooj* or *booj*, a fortified city of India, presidency of Bombay, the capital of Cutch, noted for its manufactures of gold and silver ornaments, etc. Pop. 24,000.

Bhopal, or Bopaul, *bo-păl'*, a native state of Central India. Pop. 775,000.

Bhownuggur, or Bhaunagar, *bow-nug'-gur*, a town of India, Kattigar peninsula, presidency of Bombay. Pop. 36,000.

Bhurtpore, or Bhartpur, *b'hurt-poor'*, a native state of India, in Rajpootana, tributary to the British. Pop. 800,000.—The capital is of the same name. Pop. 62,000.

Bolan Pass, *bo-lan'*, a narrow ravine, 59 miles long, in the mountains of Beluchistan, province Sarawan, on the route from the Lower Indus to Afghanistan.

Bombay' (good harbour), a flourishing seaport, the western capital of British India, situated on a small island, separated from the mainland by a narrow strait, and connected with the island of Salsette by a causeway. It is strongly fortified, and has an extensive trade. Pop. 773,196.—The **Presidency or Province of Bombay** lies between 14, 20 and 28, 30 N., and 66, 30 and 77, 20 E., and contains, including feudatory states, 191,847 square miles, and 23,273,786 inhabitants. It embraces four divisions, viz., Deccan, Konkan, Gujerat, and Sind, which are subdivided into 24 districts.

Boolundshahr, or Bulandshahr, *bool-und-shăr'*, a district and town of British India, division Meerut, North-West Provinces. Pop. of district, 936,667; of town, 15,000.

Bootan, Bhootan, or Bhutan, *boo-tan'*, a native state in the N.E. of India, bounded on the N. by the Himalaya Mountains, which separate it from Tibet. It is about 250 miles in length by 100 miles in breadth; it is mountainous, and has extensive forests. Pop. 200,000.

Brahmapootra, or Brahmaputra, *brum-ă-poo'tră* (the offspring of Brahma), also called **Lohit** (the red river), a large river of India, whose source has not yet been reached by any European, but is believed to be near the Manasarowar lakes in the plateau of Tibet, not many miles from the rise of the Sutlej. It flows through the valley of Assam and the province of Bengal, and, uniting with the Ganges, falls into the Bay of Bengal. On it navigation is carried on at a higher level (13,500 feet above the sea) than on any other river in the world.

Bundelkhand, *boon-del-kund'*, a territory of India, partly belonging to the British, between 24 and 26, 26 N., and 78 and 81, 39 E. It is noted for its diamond-mines. Area 22,400 square miles; pop. 3,170,000.

Burhampore, or Barhampur, *bur-am-poor'*, a town in the district of Moorshedabad, Bengal, British India, on the Bhagirathi. Pop. 27,110.

Burhanpore, or Barhanpur, *bur-an-poor'*, a city of the Central Provinces, British India, division Nerbudda. Pop. 29,303.

Cabul. *See* **Kabul.**

Calcut'ta, the capital of British India. Pop. 684,658. *See* REMARKS, pages 277, 278.

Cal'icut, a seaport of India, on the Malabar coast; it was the first Indian port visited by Vasco de Gama, in 1498. *Calico* is named from this town, cotton cloths having been first obtained here by Europeans. Pop. 48,000.

Cal'imere Point, a cape on the S.E. coast of India.—10, 17 N. 79, 5 E.

Calpee, or Kalpi, *kăl'pee*, a town of British India, North-West Provinces. Pop. 15,570.

Cambay', or Kambay', a small tributary state of British India, at the head of the gulf to which it gives its name. Pop. 85,000.—The capital, also called **Cambay**, has a pop. of 34,000.

Can'ara, or Kan'ara, North, the southmost district of the Bombay Presidency, British India. Owing to the prevalence of rain, the climate is peculiarly favourable to the growth of rice. Area 3911 square miles; pop. 421,840.

Canara, or Kanara, South, the most westerly district of the Madras Presidency, British India, extending

along the Malabar coast; it has extensive forests of teak and other timber. Area 3902 square miles; pop. 918,362.

Candahar. *See* **Kandahar.**

Candeish, *kan-dāsh′*, or **Khandesh,** a district of British India, Deccan division, Bombay Presidency, S. of the Nerbudda, and E. of Gujerat. It is watered by the Taptee. Pop. 1,237,231.

Candy. *See* **Kandy.**

Carnat′ic (named from the *Carnates*), a division of Southern India, Presidency of Madras, extending 550 miles along the Coromandel coast to Cape Comorin.

Carrical, or **Karical,** *kar-re-kâl′* (fish pass), a maritime town of India, Madras Presidency, on the Coromandel coast, ceded to the French by the Rajah of Tanjore in 1759. Pop. 10,000.—The territory of the same name has an area of 52 square miles and a pop. of 93,000.

Catmandoo′, or **Khatmandu′,** the capital of Nepaul, N. India, 145 miles N.N.W. of Patna. Pop. 20,000.

Ca′very, or **Cau′very,** a river of Southern India, which rises in the W. Ghauts, flows E. through Mysore and the Carnatic, and falls into the Bay of Bengal.

Cawnpore, or **Kanhpur,** *kawn-poor′*, a fertile and well-cultivated district of British India, North-West Provinces, Allahabad division. Pop. 1,156,055.

Cawnpore′, or **Kanhpur′** (city of the beloved one), the capital of the above district, on the right bank of the Ganges, 628 miles N.W. of Calcutta. It was the scene of a terrible massacre of the British by Nana Sahib in 1857. Pop. 125,000.

Ceylon′ (the island of lions), called by the natives **Singhala,** *sing-gâ′lâ*, an island in the Indian Ocean belonging to Great Britain, separated from the S. extremity of India by the gulf of Manaar and Palk Strait. Its greatest length from N. to S. is 270 miles; its greatest breadth 145 miles; and its average breadth 100 miles. Area 24,700 square miles; pop. 2,638,540.

Chan′da, a district and town British India, Central Provinces, Nagpoor division. Pop. of district, 559,000: of town, 18,000.

Chandernagore, or **Chandernagar,** *chun-der-nâ-gur′* (city of sandal-wood), a city of India, on the Hoogli, belonging to France, about 16 miles above Calcutta. Pop. 23,277.

Chittagong′, a division and district of Bengal, British India, beyond the Brahmapootra river. Pop. of division, 3,782,167; of district, 1,220,973.—The capital, also called **Chittagong,** or **Islamabad,** has a pop. of 20,604; it is very unhealthy.

Co′chin (from *kuchi*, small), a small native state in India, between Malabar and Travancore, politically connected with the Madras Presidency. Pop. 601,114. The capital, a seaport, is also called **Cochin;** it was the first place at which the Portuguese, in 1503, were permitted to erect a fort. Pop. 14,000.

Colom′bo (from *Corumbu*, harbour), the principal seaport and capital of the island of Ceylon, on the W. coast; it stands on a rocky peninsula. Pop. 100,238.

Com′orin, Cape, the southern point of the peninsula of India.—8, 6 N. 77, 30 E.

Concan, *kong′kan*, a maritime district of India, extending from Bombay to Goa, between the Western Ghauts and the sea.

Cooch Behar, *kootch be-har′*, a division of the province of Bengal, British India. Pop. 533,000.—The town of the same name is on the Toresha River, 45 miles N. of Rungpore.

Coroman′del, the eastern coast of India, extending between 10° and 16° N. lat. *See* REMARKS, page 276.

Culna, or **Kalna,** *kâl′nâ*, a town of British India, district of Bardwan, province of Bengal. Pop. 28,000.

Cutch, or **Katch,** *kutch*, a native state of India, forming a peninsula between the Indus and the gulf of Cutch. Area 6500 square miles; pop. 500,000.

Cuttack′, or **Kuttack′,** a district of British India, division of Orissa, presidency of Bengal, on the W. side of the Bay of Bengal. Area 3516 square miles; pop. 1,731,548.—The capital, also named **Cuttack,** is situated on a peninsula formed by the Mahanuddy, and is one of the healthiest places in India. Pop. 51,000.

Dac′ca, a division and district of the province of Bengal, British India, between the Ganges and the Megna or Lower Brahmapootra. Pop. of division, 8,646,012; of district, 2,196,641.—The capital, which is of the same name, is situated on the Booree Gunga or Old Ganges, and is noted for its manufactures of muslins. Pop. 70,000.

Darjeeling, or **Darjiling,** *dar-jeel′ing* (holy spot), a sanitarium in Bengal for British troops in India. Tea culture is carried on in the district with considerable success. Pop. 3157.

Dec'can, a region of Southern India, stretching across the peninsula, and bounded by the Nerbudda on the N. and the Kistnah on the S. *See* REMARKS, page 276.

Delhi, *del'le*, a division and district of the Punjab, British India, N. of Agra, between 28 and 31 N., and between 75 and 80 E. Pop. of division, 1,907,984; of district, 643,515. — The chief city, also called **Delhi**, is situated on the banks of the Jumna. It is 7 miles in circumference, and enclosed on three sides by walls constructed of large blocks of red granite, and well fortified. It is the seat of a college founded in 1792, and divided into four departments—English, Arabic, Persian, and Sanscrit. In May 1857 it was seized by the Sepoy mutineers, but was retaken by the British in September of the same year. Pop. 173,393.

Der'a Ghazee' Khan (the camp of Ghazee Khan), a district and town of the Punjab, British India, Derajat division, on the W. bank of the Indus. Pop. of district, 363,346; of town, 19,000.

Der'a Is'mail Khan (the camp of Ismail Khan), a district and town of the Punjab, British India, Derajat division, near the right bank of the Indus. Pop. of district, 441,649; of town, 19,000.

Derajat, *der-dj'ut*, a division of the Punjab, British India, including the country between the Indus and the base of the plateau of Afghanistan. Pop. 1,137,572.

Dharwar', a district of British India, Deccan division, presidency of Bombay. Area 4535 square miles; pop. 882,907.—The capital of the same name has been taken and retaken many times, both by native princes and by the British. Pop. 27,500.

Dhurbhangah, or **Darbhanga**, *dur-bân'gd*, a town of British India, Patna division, Bengal. Pop. 48,000.

Dinagepore, or **Dinajpur**, *de-naj'-poor*, a district and town of Rajshahye, Bengal, British India. Pop. of district, 1,529,906; of town, 13,042.

Dinapore, or **Dinapur**, *din-a-poor'*, a town of British India, district of Patna, Bengal, on the S. bank of the Ganges, 14 miles W. of Patna. It is a military station. Pop., including cantonment, 42,000.

Diu, *de-oo'*, a fortified town of Western India, belonging to Portugal, on a small island off the S. coast of Gujerat. Pop. 13,898. *See* REMARKS, page 278.

Elephan'ta, a small island on the W. coast of India, between Bombay and the mainland, celebrated for its singular cave-temples, one of which is 130 feet long and 123 feet broad.

Ferozepur, or **Firozpur**, *fe-roz-poor'* (city of Feroze-Togluk), a district and town of the Punjab, British India. Pop. of district, 650,519; of town, 39,600.

Furruckabad, or **Farrukhabad**, *fur-ruk-â-bâd'* (happy abode or residence), a district and commercial city of the North-West Provinces, British India, division of Agra. Pop. of district, 918,850; of city, 80,000.

Fyzabad, *fi-zâ-bâd'*, or **Faizabad**, a division, district, and town of Oudh, British India. Pop. of division, 3,379,262; of district, 1,025,000; of town, 39,000.

Gan'ges (from Sansc. *ganga, flowing stream*, or *the* stream), one of the largest rivers of Asia, flows from W. to E. through the N. part of India, and is held in the highest veneration by the natives of India. It issues in a small stream from a mass of perpetual snow on the S. side of the Himalaya Mountains, and is called the *Bhagirathi* till joined by the Alakananda, below Sirinagar. On passing Hurdwar, it enters the plains of India, and at Allahabad receives the Jumna. It is swelled by the accession of several large rivers in its progress to Patna, where it is from one to three miles broad, and thirty feet deep. About 200 miles from the sea it branches into a delta, the numerous branches of which form a labyrinth of channels and creeks, called the *Sundarbans*. The western or Hoogli branch, which passes by Calcutta, is the only one that is navigable. The eastern branch receives the Brahmapootra before pouring its flood into the Bay of Bengal.

Gaya, *ghi'â*, a district and city of Bengal, British India, province of Behar, on a tributary of the Ganges. The city is one of the holy cities of the Hindoos. Pop. of district, 2,057,980; of city, 67,000.

George Town, now usually called **Penang'**, the chief town of the island of Penang or Prince of Wales Island, in the Straits of Malacca, and the capital of the British Possessions called the Eastern Straits Settlements. Pop. about 25,000.

Ghauts, The, *gawts* (from Sansc. *ghatt*, a pass through mountains, hence also, as here, a range or chain of mountains), two extensive chains of moun-

tains in Southern India. The western extends nearly 1000 miles from Cape Comorin to Surat; the eastern, almost of equal length, is on the opposite coast.

Ghazipore, or **Ghazipur**, *gâ-ze-poor'*, a district of British India, North-West Provinces, watered by the Ganges. The climate is healthy, and the soil is so fertile that it yields two crops in the year. Area 1451 square miles; pop. 873,130. — The capital is of the same name, and is situated on the left bank of the Ganges, 46 miles N.E. of Benares. Pop. 39,000.

Ghuznee, or **Ghazni**, a fortified city of Afghanistan, situated 7726 feet above the sea, 80 miles S.S.W. of Kabul. Pop. estimated at 20,000.

Go'a, a territory of India, belonging to the Portuguese, Bombay Presidency, province of Bejapore. Pop. 407,700.— **New Goa**, or **Panjim**, the capital of the Portuguese possessions, is on an island at the mouth of the Mandona River. P. 14,200. *See* REMARKS, p. 278.

Goda'very, a river of India, which rises in the W. Ghauts, and, after traversing nearly the whole breadth of the peninsula, falls, by several mouths, into the Bay of Bengal.

Goda'very, a district of British India, presidency of Madras. Area 7315 square miles; pop. 1,620,634.

Gog'ra, a river of India, which rises in the Himalaya Mountains, and flows into the Ganges above Patna.

Golcon'da, a ruinous city of India, Nizam's Dominions, formerly celebrated as a mart for diamonds.

Goruckpore, or **Gorakhpur**, *go-ruk-poor'*, a town of British India, North-West Provinces, capital of a district of the same name, reckoned one of the healthiest places in India. Pop. 52,000. —The district has a pop. of 2,019,361.

Gujerat, or **Gujrat**, *gooj-rât'*, a district and town in the Punjab, British India. The town is noted for its inlaid work in gold and iron. Pop. of district, 689,115, of town, 18,750.

Gurhwal, **Garhwal**, *gur'wâl*, a district of Kumaon division, North-West Provinces, British India. Pop. 310,288.—Also, a native state of the North-West Provinces. Pop. estimated at 150,000.

Gwa'lior Territories, or **Dominions of Sindia**, a native state o Central India, under British superintendence. Area 24,000 square miles pop. 2,500,000.

Gwa'lior, a city of Central India, capital of the above state, on an affluent of the Jumna, 66 miles S. of Agra, with a rock fortress 300 feet high, capable of accommodating 15,000 men.

Helmund', a river of Afghanistan, which rises near Kabul, and falls into Lake Hamoon after a course of about 350 miles. Its banks abound with traces of former civilisation.

Herat', ancient *Aria*, a commercial city of Afghanistan, in an extensive and fertile plain, near the Heri-rud; it is strongly fortified. Pop. estimated at 50,000.

Himala'ya (the abode of snow), a stupendous range of mountains between India and Tibet, extending in length about 1500 miles, and in breadth from 100 to 300 miles. Its loftiest peak, *Mount Everest*, in 27, 59, 16 N. and 85, 58, 8 E., is 29,002 feet above the sea-level, and is thus the highest known point of the earth's surface.

Hindu Kush, *hin-doo koosh'* (the Hindu or Indian Caucasus), a range of lofty mountains separating Afghanistan from Afghan Turkestan.

Hoogli, or **Hugli**, a river of India, formed by the junction of two western branches of the Ganges. It is 15 miles wide at its mouth.

Howrah, or **Haura**, *how'râ*, a town of British India, in a district of the same name, province of Bengal, division of Rajshahye, on the right bank of the Hoogli, opposite Calcutta. Pop. of district, 635,381; of town, 105,575.

Hurdwar', a town of the North-West Provinces, British India, situated on the Ganges, where it issues from the Himalaya Mountains.

Hyderabad', **Hydrabad**, or **Haidarabad** (the city of Hyder), a city of British India, capital of the division of Sind, Bombay Presidency, near the E. bank of the Indus. Pop. 36,000.—The district of the same name has a pop. of 754,624.

Hyderabad, **Hydrabad**, or **Haidarabad**, a walled city of India, capital of the Nizam's Dominions, in a barren and rocky district on the Musi, a tributary of the Kristna. It is a distinctly Mussulman city, and the principal mosque is built on the model of the Kaaba at Mecca. Pop. estimated at 263,000.—The state of the same name has a pop. of 9,200,881.

Indore' Agency, an administrative province of Bengal, India, consisting of several native states, the chief of which are *Gwalior*, *Indore Territory* or *Dominion of Holkar*, *Bundelkhand*, and *Bhopal*.

Indore, a town of India, in the above agency, capital of the state of Indore. Pop. estimated at 15,000.

In'dus, a large river of Asia, which rises in the table-land of Tibet, about 31, 20 N. and 80, 30 E. Flowing N.W. it passes Leh in Ladak, Kashmir, and, after a course of about 250 miles, is joined by the Shyook. After penetrating the Himalaya, it takes a southerly course, and, near Attock, is joined by the Kabul, when it becomes in many places rapid and deep. About 400 miles farther down it receives, in one united stream, the five rivers of the Punjab, and, dividing into several channels, falls into the sea by seven mouths. *See* REMARKS, page 277.

Iskardo', a valley of Kashmir, India, traversed by the Upper Indus. In it is a town of the same name.

Jacobabad', a district and town of British India, division of Sind, near the Beloochee frontier. Pop. of town 5205.

Jelalabad', or **Jalalabad'**, a town of Afghanistan, near the Kabul River, famous for the siege which it sustained when garrisoned by the British force under Sir Robert Sale in 1841-2. Pop. 3000.

Jeypore, Jeypur, or **Jaipur**, *ji-poor'*, one of the five principal Rajpoot states of India, tributary to the British. Area 15,250 square miles; pop. estimated at 1,250,000.—The capital is of the same name, and is situated in a valley 148 miles S.W. of Delhi; it contains a magnificent palace, numerous temples of the finest Hindoo style, and is altogether the handsomest and most regularly-built city in India. Pop. 140,000.

Jhelum, or **Jhelam**, *je'lum*, or **Behut'**, the farthest W. of the "five rivers" of the Punjab, India, rises in Kashmir, and, after a S.W. course of about 350 miles, joins the Chenab 80 miles N.N.E. of Mooltan.

Joudpore, or **Jodhpur**, *jod-poor'*, a city of India, capital of the Rajpoot state of Joudpore or Marwar. Pop., including suburbs, 150,000.—The state has a pop. of 2,000,000.

Jounpore, or **Jaunpur**, *joon-poor'*, a district and town of British India, N.W. Provinces. Area of district, 1544 square miles; pop. 1,026,100; of town, 24,000.

Juggernaut', or more properly **Jaggannatha**, or **Pooree**, or **Puri**, a town on the coast of Orissa, British India, near Lake Chilka. It contains the famous temple and car of Juggernaut, the pagoda of which being 200 feet high, serves as an important landmark at sea.

Jullundur, or **Jalandhar**, *jul-lun-dur'*, a division, district, and town in the Punjab, British India. Pop. of division, 2,421,781; of district, 789,555; of town, 52,200.

Jum'na, a river of India, which issues from the Himalaya range, flows through Delhi and Agra, and joins the Ganges at Allahabad.

Ka'bul, Ca'bool, or **Ca'bul**, an extensive province of Afghanistan, bounded on the N. by the Hindu Kush, which separates it from Balkh.

Ka'bul, a fortified city in the above province, and capital of Afghanistan. Pop. 60,000. *See* REMARKS, page 273.

Ka'bul, or **Jui-Shir**, *joo'e-shir*, a river of Afghanistan, rises near 34, 21 N. and 68, 20 E., at an elevation of 8400 feet, and, after an E. course of 320 miles, joins the Indus at Attock.

Kandahar, or **Candahar**, *kän-dä-här'*, a province and city of Afghanistan, inhabited by Afghans of the Dourannee tribe. The capital, a fortified city, is the chief station on the caravan route from India by the Bolan Pass to Herat. Pop. estimated at 50,000.

Kandy, or **Candy**, *kan'de* (splendour), a town in the interior of the island of Ceylon, 62 m. N.E. of Colombo. Pop. 17,500.

Karachi, or **Kurrachee**, *kur-ratch'ee*, a district and town of Sind, Bombay Presidency, British India. The town is a port of great commercial importance. Pop. of district, 478,688; of town, 58,000.

Karikal' (fish-pass), a maritime town of India on the Coromandel coast, 8 miles S. of Tranquebar; it was ceded to the French by the rajah of Tanjore in 1759. Pop. 93,000.

Kashmir, or **Cashmere**, *kash-meer'*, a native state in the N.W. of India, tributary to the British. The state is divided into five provinces, *Cashmere* or *Kashmir*, *Ladak*, *Jamoo*, *Baltestan*, and *Dardestan*. Area 68,000 square miles; pop. 1,000,000.—The capital is **Sirinagar** or **Srinagar**, on the Jhelum. *See* REMARKS, page 277.

Kelat', or **Khelat'** (castle), a strongly fortified town, the capital of Beloochistan, on a hill 6000 feet above the sea, in 28, 52 N. 66, 30 E. Pop. 12,000.

Khatmandu', the capital of Nepaul, N. India, 145 miles N.N.W. of Patna. Pop. 20,000.

Khooloom', **Khulm**, *koolm*, or

Tashkurgan, *tash-koor'gan,* a district of Afghan Turkestan, between Kunduz and Balkh.

Khy'ber Pass, the principal N. pass from India into Afghanistan. It is narrow and dangerous, slaty cliffs rising on each side from 600 to 1000 feet. It is 30 miles in length, and its passage is controlled by a bloodthirsty tribe. This pass was the scene of a terrible disaster to a British army in 1842, when 4000 soldiers and 12,000 camp followers were massacred.

Kist'na, or **Krish'na,** a river of India, which rises in the Western Ghauts, and, after a course of 700 miles, falls into the Bay of Bengal near Masulipatam.

Kistna, or **Krishna,** a district of Madras Presidency, British India. Pop. 1,452,734.

Kolapore, Kolapur, or **Kolhapur,** *ko-lä-poor',* a Maratha state of India, presidency of Bombay. Pop. 800,267. —The town of the same name is 185 miles S.E. of Bombay. Pop. 40,000.

Kumaon, or **Kumaun,** *koo-moun',* a mountainous district in the North-West Provinces of British India, W. of Nepaul. Pop. 433,314.

Kunduz, *koon-dooz',* a district of Afghan-Turkestan, separated from Cabul by the Hindu Kush. The town of the same name is a wretched place, chiefly composed of mud huts and straw sheds. Pop. 1500.

Kurnal', or **Karnal',** a district and town of the Punjab, British India, division of Delhi. Pop. of district, 622,621; of town, 23,200.

Kurnool, or **Karnul,** *kur-nool',* a district and town of British India, Madras Presidency. Pop of district, 914,432; of town, 25,000.

Kurrachee. *See* **Karachi.**

Laccadive Isles, *läk'kä-dive* (ten thousand isles), a group of islands surrounded by coral reefs in the Indian Ocean, off the coast of Malabar.—11, 20 N. 72, 30 E.

Ladakh', or **Middle Tibet,** a province of Kashmir, W. of Tibet, between 32, 20 and 35 N., and 75, 30 and 79, 30 E. Pop. 125,000.

Lahore', a division and district of the Punjab, British India. Pop. of division, 2,191,517; of district, 924,106.

Lahore', the chief city of the above division, and the capital of the Punjab, near the left bank of the Ravee, on the great road from Delhi to Cabul. Pop. 131,000.

Leh, the capital of the province of Ladakh, Kashmir, near the Upper Indus. Pop. 6000.

Loodia'na, or **Ludhia'na,** a fortified town and military station of the Punjab, British India, near the Sutlej. Pop. 44,200.—Also, a district of British India, of which the above is the capital. Pop. 618,835.

Luck'now, a city of British India, the capital of the division and district of the same name, on the Goomty, a tributary of the Ganges, 174 miles N.W. of Benares. It is noted for its heroic defence against the Sepoy rebels in 1857. Pop. 261,485.

Madras', a presidency of British India; it extends along the E. coast, and embraces a portion of the S.W. of the peninsula of India. Area, including feudatory states, 150,248 square miles; pop. 33,840,617.

Madras, a maritime city of British India, the capital of the above presidency, on the Coromandel coast. It is the seat of most extensive commerce, and stands on a flat shore, along which runs a rapid current, with a violent surf. *Fort St George,* the citadel, is surrounded by a spacious esplanade, to the N. of which stands the *Black Town of Madras,* in which reside the Armenian and Portuguese merchants, and also many Europeans unconnected with the Government. Pop. 406,112.

Madu'ra, a fortified city of British India, presidency of Madras, the capital of a district of the same name, 33 miles S.S.E of Dindigal; it is of great antiquity, and was formerly the seat of learning in Southern India. Pop. 52,000—The district has a pop. of 2,266,615.

Mahanuddy, or **Mahanadi,** *mä-hä-nud'de* (the great river), a river of Central India, which, after an E. course of 520 miles, enters the Bay of Bengal by numerous mouths.

Malabar', a maritime district of British India, extending along the W. coast, but varying greatly in extent according to different geographers. The name is sometimes applied to the whole coast from Bombay, and even from Surat, to the S. extremity of the peninsula, but denotes more properly that portion of this tract between Canara and Coorg on the N. and Cochin on the S. Pop. 2,336,032.

Malac'ca, one of the Straits Settlements belonging to Britain, on the W. coast of the Malay Peninsula. Pop. 93,579.—The capital is of the same name. Pop. 20,000.

Malacca, Strait of, the narrow sea separating the Malay Peninsula from the island of Sumatra.

Malay, Malacca, or the **Malay Peninsula**, the ancient *Chersonesus Aurea* (the *Golden Chersonese* of Milton), a country of India beyond the Ganges, connected with the British provinces on the N. by the Isthmus of Kraw. It is about 750 miles in length, with an average breadth of 120 miles, and is traversed from N. to S. by a range of mountains, from which descend numerous streams. Its shores are thickly studded with small islands. Malaya proper, extending from 1, 20 to 7 N. lat., includes the British settlements of *Malacca* and *Province Wellesley*, and a number of small native states, of which the principal are *Perak, Johore, Pahang*, and *Salangore*. Its area is estimated at 45,000 square miles, and its pop. about 420,000.

Mal'dah, a district of Bengal, British India, Rajshahi division. Area 1859 square miles; pop. 710,310.—The chief town, also called **Maldah**, is on the left bank of the Mahanadi, 73 miles N. of Burhampore. It is a miserable place. Pop. 5500.

Mal'dives (thousand isles), a cluster of small coral islands in the Indian Ocean, W. of Ceylon, to which they are tributary. Cocoa-nuts and cowrie shells are their principal produce. Pop. between 150,000 and 200,000.

Mal'wah (the mountainous country), an elevated plateau of India, bounded on the N.E. by the valley of the Ganges; E. by Bundelkhand; S. by the Vindhya Mountains; and W. by the Aravulli Mountains. Its elevation is from 1500 to 2500 feet above the sea.

Manaar', Gulf of, a strait separating the island of Ceylon from the peninsula of India.

Mangalore, or **Mangalur**, *mang-gā-loor'* (glad town), a seaport of British India, presidency of Madras, the capital of the province of S. Canara. Pop. 30,000.

Martaban', a frontier town of Pegu, British Burma, on the Gulf of Martaban, near the mouth of the Saluen. Pop. 6000.

Martaban, Gulf of, an inlet of the Bay of Bengal, having Pegu on the N.W. and the Tenasserim Provinces on the S.E.

Masulipatam' (the city of fishes), a seaport of British India, district Kistna, on the Coromandel coast, 226 miles N.N.E. of Madras. Pop. 36,500.

Mee'rut, a division and district of British India, N.W. Provinces. Pop. of division, 4,977,173; of district, 1,276,104.—The capital, a military station, is situated 85 miles N.E. of Delhi. Here the Sepoy mutiny broke out on the 10th of May 1857. Pop. 82,000.

Mekran' (the country of rogues), the S. or maritime part of Beloochistan; it contains extensive deserts. Area estimated at 100,000 square miles; pop. 200,000.

Mergui, *mer-ghe'*, a town of British Burma, Tenasserim division, at the mouth of a river of the same name. It carries on an extensive foreign trade. Pop. 8700.

Mergui Archipelago, a chain of islands, extending about 150 miles along the coast of Tenasserim; the principal are *Great* and *Little Canister, St Matthew*, and *Domel*.

Mirzapore, or **Mirzapur**, *mir-zā-poor'*, a city of British India, capital of a district of the same name, N.W. Provinces, on the Ganges, 32 miles S.W. of Benares. Pop. of city, 67,274; of district, 1,015,826.

Mooltan', or **Multan'**, a city of the Punjab, British India, Lahore division, about 4 miles E. of the Chenab. Pop. 68,674.—The district of Moultan has a pop. of 551,964.

Moorshedabad, or **Murshidabad**, *moor-she-dā-bād'*, a city of British India, capital of a district of the same name, in the province of Bengal. Pop. of city, 46,000; of district, 1,200,825.

Moradabad, or **Muradabad'**, a district of British India, N.W. Provinces, Rohilkhand division. Pop. 1,122,437.—Also, the capital of the above district, 90 miles N.E. of Delhi. Pop. 63,000.

Moulmein, *mool-mine'*, the chief town of Tenasserim, British Burma, at the mouth of the Salween. Pop. 53,107.

Muneepore, Munipoor, or **Manipur**, *mun-e-poor'*, a protected native state of India, between Assam and the Burman Empire. Pop. 147,345.

Muttra, or **Mattra**, a town of British India, North-West Provinces, capital of a district of the same name in Agra division, on the right bank of the Jumna. Pop. 60,000.—The district has a pop. of 783,530.

Mynpuri, or **Mainpuri**, *min-poo're*, a town of British India, capital of a district of the same name, in the North-West Provinces. Pop. 22,000; of district, 765,845.

Mysore, or **Maisur**, *mi-soor'*, a state

of South India, consisting of an elevated table-land, with isolated and detached ranges of hills of considerable elevation. As it is nearly 3000 feet above the sea, its climate is unusually temperate and healthy. Area 30,500 square miles; pop. 4,186,399.—The capital, of the same name, is situated 10 miles S.W. of Seringapatam. Pop. 57,000.

Nagpore, or **Nagpur,** *nâg-poor′* (the town of serpents), a city of British India, Central Provinces. Pop. 90,000. —Also, a division and a district of the Central Provinces. Pop. of division, 2,439,675; of district, 631,109.

Negrais, Cape, *ne-grice′*, the S.W. extremity of the province of British Burma, in the Bay of Bengal.—16, 2 N. 94, 12 E.

Neilgherries, *neel-gher′rēz*, or **Nilagiris** (the blue mountains), a range of mountains in the S. of Mysore, India, connecting the Eastern and the Western Ghauts, between 11° and 12° N. lat., and 76° and 79° E. long. Their agreeable climate and romantic scenery make them a favourite resort of invalids, and of late years they have been made the seat of the Madras government during the hot weather. *Dodabetta* (the great hill), the highest point, is 8760 feet above the sea.

Nepaul′, or **Nepal′,** a native state of N. India, separated from Tibet by the Himalaya Mountains, and bounded on the S. by the North-West Provinces and the province of Behar. Area, 54,500 square miles; pop. 2,500,000.

Nerbudda, or **Narbada,** *nar-bud′ă*, ancient *Narmadus* (the bestower of pleasure), a river of India, rises in the British district of Ramgurh, and falls into the Gulf of Cambay, after a course of 750 miles.

Nic′obar Islands, called by the Malays *Pulo Sambillong* (nine islands), a group in the S.E. of the Bay of Bengal. They are hilly, covered with wood, and yield in abundance cocoanuts, betel-nuts, oranges, sugar, etc.

Odeypore, Oodeypore, or **Udaipur,** *oo-dā-poor′* (city of sunrise), one of the Rajpoot states, with a town of the same name in W. India, 135 miles S.S.W. of Ajmer. Pop. of state, 1,161,400.

Oris′sa, a division of British India, Lower Bengal, stretching along the N.W. coast of the Bay of Bengal, from the northern extremity of Ganjam to the N. of the Subanrekha (streak of gold). The inhabitants are chiefly a wild race of Hindoos, called Uriyas. **Cuttack,** on the Mahanadi, is the chief town. Pop. of division, 3,559,756; including tributary states, 5,184,066.

Oudh, *ood*, one of the North-West Provinces of British India, to the E. of Delhi and Agra. It is watered by the Goomty and Gogra. Area 24,069 square miles; pop. 11,407,625.—**Lucknow** is the capital.

Oudh, a city of India, the former capital of the above province, on the Gogra, 75 miles E. of Lucknow.

Oujein. *See* **Ujjain.**

Palghat′, a town of British India, presidency of Madras, district of Malabar, on the Palaur, 68 miles S.E. of Calicut. Pop. 31,000.

Pa′li, a commercial town of India, state of Joudpur, on an affluent of the Loony, 40 miles S.S.E. of Joudpur. Pop. 50,000.

Palk Strait or **Channel,** *pawk*, separates the island of Ceylon from India; where narrowest, it is 40 miles across.

Palmyras Point, a low headland of India, in the Bay of Bengal.—20, 41 N. 87, 9 E.

Panjim. *See* **Goa.**

Paropamisan′ Mountains (the flat-topped hills), a range in the N.W. of Afghanistan and E. of Persia, connected E. with the Hindu Kush, and W. with the Elburz Mountains S. of the Caspian. From E. to W. they extend 350 miles.

Pat′na (from Sanscrit *pattana*, a town or city), a city of India, the capital of a district of the same name, province of Behar, on the S. bank of the Ganges; it has a great trade. Pop. 160,000; of district, 1,796,619.

Pegu, *pe-goo′*, a division of British Burma, watered by the rivers Irrawadi and Salween. It is exceedingly fertile, abounding in rice, and containing large teak forests. Pop. 2,323,512. —The chief town, of the same name, is situated on the Pegu River, 62 miles N. of Rangoon. Pop. 6000.

Penang, Pulo-Pinang, or **Prince of Wales Island,** an island off the W. coast of the Malay Peninsula, from which it is separated by a narrow strait. It is 110 square miles in extent, densely wooded, rich in tropical productions, remarkably healthy, and a favourite resort for invalids. Pop. 62,000.—**George Town,** usually called **Penang,** is the capital.

Peshawar, *pesh-â′wur* (the advanced fortress), a city of the Punjab, British India, situated in a beautiful plain

watered by the Kabul, and surrounded by lofty mountains, 12 miles E. of the Khyber Pass, and 40 miles W. of Attock; it is one of the largest military stations under the government of British India. Pop. of city, 57,000; of cantonment, 23,000.—Also, a division and district of the Punjab, between the Indus and the Khyber Mountains, through which is the Khyber Pass. Pop. of division, 1,181,289; of district, 592,674.

Pilleebheet, or **Pilibheet**, *pil-le-beet'*, a town of Bareilly, British India, North-West Provinces, on the Gurrah. Pop. 30,000.

Plas'sey, a small town of British India, province of Bengal, 83 miles N. of Calcutta; here British supremacy was established in India by the defeat of Surajah Dowlah, by Colonel Clive, on 23rd June 1757.

Pondicherry, or **Pondicheri**, *pon-de-sher're* (properly *Puduchéri*, the new village), a maritime town, the capital of the French settlements in India, on the Coromandel coast, 85 miles S.S.W. of Madras. Pop. 50,000.

Poo'na, or **Pu'na**, a city of British India, presidency of Bombay, the capital of a district of the same name, situated in a treeless plain, 2000 feet above the sea, 75 miles S.E. of Bombay. Pop. 120,000.

Pooree, or **Puri**. *See* **Juggernaut**.

Prince of Wales Island. *See* **Penang**.

Prome, a district and town of Pegu, British Burma, on the Irrawadi. The town is called by the natives *Pri*. Pop. of district, 322,342; of town, 29,000.

Province Wellesley, a British settlement on the W. coast of the Malay Peninsula, opposite Penang or Prince of Wales Island. Area 140 square miles; pop. 97,324.

Pu'licat, a maritime town of India, presidency of Madras, at the S. entrance of the lake of the same name, 20 miles N. of Madras; the lake, studded with several islands, is 35 miles long, and from 3 to 12 miles broad.

Pun'jab, The, or **Pan'jab** (the five waters), an extensive province of British India, embracing the country watered by the Indus and its five great affluents—the Jhelum, Chenab, Ravee, Beas, and Sutlej. It is situated in the N.W. of India, and, including feudatory states, has an area of 107,010 square miles, and a population of 18,850,437.

Quedah, *kä'dä*, or **Kedah**, *ked'ä*, a state of the Malay Peninsula, between 5, 40 and 7 N., and 99, 40 and 101 E. Area about 4500 square miles; pop. 21,000.

Quet'ta, or **Quet'tah**, a fort occupied by a British garrison, 30 miles from the head of the Bolan Pass in Beluchistan.

Rajpoota'na, or **Rajputa'na**, an extensive tract of India between 23, 35 and 29, 57 N., and 70, 5 and 77, 40 E. It embraces 16 states, and takes its name from the prevailing population, the Rajpoots, *i.e.*, "kings' sons," a tall, vigorous, athletic, and military race. Area 130,934 square miles; pop. about 11,005,512.

Rangoon, or **Rangun**, *ran-goon*, town of British Burma, the capital of district of the same name, on the eastern branch of the Irrawadi, about 26 miles from the sea. It was stormed and taken by the British in 1852. Pop. 134,176.

Ratnapoo'ra (the city of gems), a town and military port of Ceylon, 15 miles W. of Adam's Peak.

Rohilkhand, *ro-hil kund'*, a division of British India, North-West Provinces, extending from the Ganges on the S. to the hill districts of Kamaun on the N., and from where the Ganges leaves the hills to the frontiers of Oudh. Area 11,805 square miles; pop. 5,436,314.

Roumania Point, the S. extremity of the Malay Peninsula, and of the continent of Asia.—1, 30 N. 104, 20 E.

Salem, *sā'lem*, a district of British India, presidency of Madras, separated from Coimbatore by the Cauvery. Pop. estimated at 1,966,995. The chief town of the same name has a pop. of 50,000.

Salsette, *sâl-sett'*, an island on the W. coast of India, N. of Bombay Island, with which it is connected by a causeway. It is 18 miles long by 13 miles broad, and is rich in Hindoo antiquities. Pop. 12,000.

Satpura, *sât-poo'rá*, a small town of India, in the territory of Indore, on a tributary of the Nerbudda. It gives name to a range of mountains running E. and W. parallel to the Vindhya Hills, and separated from them only by the valley of the Nerbudda. They are of volcanic origin, and are almost wholly peopled by Bheels.

Satta'ra, or **Sata'ra**, the capital of a district of the same name in British India, presidency of Bombay, situated in a deep hollow nearly surrounded by hills, 58 miles S.E. of Poona. Pop. 25,000; of district, 1,062,350.

Sealkote, Sealcote, or **Sialkot,** *se-āl-kot′*, a town of the Punjab, British India, Amritsar division, 65 miles N.N.E. of Lahore. Pop. 39,700.

Seharunpore, or **Saharanpur,** *să-hâ-run-poor′*, the chief town of a district of the same name in Meerut division, North-West Provinces, British India, on a small stream, not far from the left bank of the Jumna. Pop. of town, 45,000; of district, 884,017.

Serampore, or **Serampur,** *ser-am-poor′*, a town of British India, province of Bengal, on the Hoogli, 14 miles above Calcutta; it is principally known as the chief station of the Baptist missionaries, who distinguished themselves as translators of the Scriptures into oriental languages.

Seringapatam′, a strongly fortified town of Mysore, India, on the western extremity of an island formed by the Cauvery, 9 miles N.E. of Mysore. Pop. 10,594.

Shahjehanpore, or **Shahjahanpur,** *shâ-jâ-hân-poor′*, a town of British India, the capital of a district of the same name, North-West Provinces, Rohilkhand division, on the Gurrah. Pop. 73,000; of district, 949,579.

Shapuri, *shâ-poo-re′*, an island of British Burma, off the coast of Aracan, opposite the mouth of the Naaf River.

Shikarpur, *shik-ar-poor′*, one of the most important commercial towns of Sind, India, at the junction of the routes leading to the Punjab on the N., to Karachi on the S., to Marwar on the E., and to Candahar on the W. Pop. 39,000.

Sik′kim, a small mountainous state of N.E. India, between Nepaul on the W. and Bhutan on the E. Pop. 7000.

Sim′la, a mountainous district of the Punjab, British India, between the Sutlej and the Jumna. Pop. 43,000. *See* REMARKS, page 278.

Sind, Sindh, or **Scinde,** *sind*, a river of India, rises in Malwah, flows N.E., and unites with the Jumna after a course of 260 miles. Also, a division of the presidency of Bombay, British India, to the W. of Rajpootana. Pop. 2,413,817.—**Hydrabad** is the capital, and **Karachi** or **Kurrachee,** at the mouth of the Indus, is its chief port.

Singapore, *sing-gă-pore′*, an island belonging to Great Britain at the S. extremity of the Malay Peninsula; it is about 27 miles in length by 11 miles in breadth, and forms a part of the Straits Settlements. Its surface is low and densely wooded. Although so near the equator, it is exceedingly healthy. Pop. 139,208.

Singapore, the capital of the above colony, on the S. side of the island, on a creek or rivulet of the same name; it is the chief emporium of trade in the Indian Archipelago. Pop. 82,000.

Sirinagar, *sir-ē-nă-gur′*, or **Srinagar,** *rin-ă-gur′*, a town of India, the capital of Kashmir, in a beautiful valley, on the Jhelum, here called Bihat. Pop. about 150,000.

Sir-i-kol′, or **Victoria,** a lake in Kunduz, Afghan-Turkestan, 14 miles long by 1 mile broad; it is 15,600 feet above the sea, and forms one of the sources of the Amoo Daria.

Soliman or **Sulaiman Mountains,** *soo′lă-man*, a range of high mountains running N. and S. in the E. of Afghanistan. The loftiest summit is *Takht-i-Soliman* (the throne of Solomon), 12,000 feet high.

Straits Settlements. Pop. 423,384. *See* REMARKS, page 278.

Sundarbans. *See* **Ganges.**

Surat′, a city of British India, presidency of Bombay; it is the chief place in the district of the same name, and is situated on the Tapti, 20 miles from its mouth in the Gulf of Cambay. Pop. 110,000; of district 614.198.

Sut′lej, a large river of India, the most easterly of the five rivers of the Punjab. It issues from Lake Rhawan Hrad, in Tibet, about 20,000 feet above the sea. Descending from the Himalaya, it receives, 500 miles from its source, the Beas, and 300 miles farther down the united stream, which is called the Ghara, forms a junction with the Indus. The Sutlej is spanned by a magnificent bridge, named the Empress, in connexion with the Indus Valley Railway; it consists of 16 spans, each 250 feet long.

Tanjore, or **Tanjur,** *tân-joor′*, a fortified city of Southern India, the capital of a division of the same name, presidency of Madras, on an arm of the Cavery, 170 miles S.S.W. of Madras. Pop. 43,000.

Tanna, or **Thana,** *tan′na*, a town of British India, the capital of a district of the same name, presidency of Bombay, on the island of Salsette, 20 miles N.N.E. of Bombay. Pop. 15,000.

Tap′ti, a river of India, rises near Baitul, flows W. with a very winding course of about 500 miles, and falls into the Gulf of Cambay 20 miles below Surat.

Tassisu'don, a town of N.E. India, the capital of the native state of Bhutan, in a fertile valley of the Himalayas, near the frontier of Tibet.

Tellicheri, *tel-le-cher're*, a seaport of British India, presidency of Madras, Malabar division, beautifully situated on the sea-coast, 43 miles N.N.W. of Calicut. Pop. 20,504.

Tenas'serim, a division of British Burma, consisting of a long narrow strip of territory, measuring from N. to S. 500 miles, while its breadth is only from 40 to 80 miles, and lying between 11 and 17 40 N., and 97, 30 and 99, 20 E. It is mountainous and well wooded, but there are extensive tracts favourable to the growth of cotton, indigo, rice, sugar, etc. Pop. 825,741.—The town Tenasserim is on the S. bank of the river of the same name, 50 miles E.S.E. of Mergui.

Tranquebar' (village on the wave), a fortified seaport of British India, presidency of Madras, district of Tanjore, on the Coromandel coast, at one of the mouths of the Cauvery. Pop. 14,000.

Travancore,' a province of India, forming the south-western extremity of the peninsula from Cochin to Cape Comorin. Area 6730 square miles; pop. 2,401,158.

Trichinopoli, *tritch-in-op'ol-e*, a city and fortress of British India, presidency of Madras, in a district of the same name, on the S. bank of the Cauvery. Pop. of city 76,500; of district 1,200,406.

Trincomalee', or **Trinkomali'**, a seaport on the N.E. coast of the island of Ceylon, with a strong fortress and an excellent harbour, capable of accommodating any fleet in the world with the greatest safety. Pop. 9900.

Trivan'drum, or **Trevan'dram**, a town of Southern India, the capital of Travancore, on the Malabar coast, 50 miles N.W. of Cape Comorin. Pop. 12,000.

Tum'loong, the capital of the native state of Sikkim, India, on the Teesta, 32 miles N.N.E. of Darjeeling.

Ujjain, or **Oojein**, *oo-jān'*, a fortified city of Central India, 254 miles S.W. of Gwalior.

Vellore, or **Vellur**, *vel-loor'*, a town and strong fortress of Southern India, presidency of Madras, North Arcot division, on the Palar, 15 miles W. of Arcot. Pop. 38,000.

Vindhya Mountains, *vind'yā* (the barrier), a range in India, from 2000 to 2600 feet high, between 22, 24 N. and 74, 80 E.

Vizagapatam', a maritime town of British India, presidency of Madras, the chief town of the district of the same name, on the Coromandel coast, 57 miles E. of Golconda. Pop. 32,500.

Wellesley Province. *See* **Province Wellesley.**

INDO-CHINA.

Indo-China is a convenient name for the south-eastern countries lying between India and the Chinese Empire.

Countries.	Chief Towns.
Independent Burma	Mandalay, Bamo.
Siam	Bankok.
French Cochin-China	Saigon.
Cambodia, French Protectorate	Panompin.
Anam, French Protectorate	Hué, Hanoi.

Gulfs.—Siam, Tonquin.

Rivers.—Irrawadi, Salween, Menam, Mekong, Sang-Koi.

Capes.—Romania, Camboja Point.

REMARKS.

Indo-China extends from 1° 20′ to 28° N. lat., and from 93° to 109° E. long. Its greatest length from N. to S. is about 1800 miles; and its breadth, along the 21st parallel, about 900 miles.

This portion of Asia is distinguished by its long parallel chains of mountains, with corresponding valleys, each watered by a considerable river. Without irrigation, the surface of the up-country is covered with a light powder barren as sand, or with a crust as hard as rock; but the rivers annually overflow when the mountain snows melt, so that their deltas and lower reaches are granaries of rice. The forests yield rose-wood, sandal-wood, teak, iron-wood, the banana, cinnamon, sago, and cocoa-nut. They are the haunts of monkeys, tigers, and elephants. Indo-China is rich in metals, both the precious and the useful. The inhabitants, through all their varieties, may be described as simple-minded and light-hearted, consequently rather indolent and fond of amusement. Buddhism prevails, modified in Anam, as in China, by the teaching of Confucius. Mohammedanism is confined to the Malay population. The relative importance of the states in Indo-China is shown by the following figures:—

	Square Miles.	Population.
Independent Burma, . .	194,500	4,200,000
Siam, ...	280,500	5,750,000
French Cochin-China, . .	22,956	1,592,000
Cambodia, French Protectorate,	32,380	890,000
Anam, French Protectorate, viz.,—		
Cochin-China proper, .	106,000	6,000,000
Tonquin, ...	64,000	15,000,000

In three of these states, viz., Independent Burma, Siam, and Anam, considerable tracts are occupied by tribes whose allegiance is given to whichever of the neighbouring states may be the most powerful at the time. Such are the Shans and the Laos, two names for the same sort of people, who occupy the immense interior conterminous with the well-organized portions of Burma, Siam, Anam, and China. Karens is the name of a practically independent tribe, occupying a mountainous region at the corner where meet the territories of Siam, Independent Burma, and British Burma. In the north of Independent Burma, also, there is a considerable tract occupied by practically independent tribes.

Throughout Indo-China the white elephant, which usually means a brownish-yellow elephant with white spots about the head, is revered. In both Siam and Independent Burma he enjoys a state establishment. Steamers ascend the Irrawadi to Bamo, whence there is a trade-route into the Chinese province of Yunnan. None of the other great rivers of Indo-China can be navigated continuously for more than 100–200 miles from the sea. Below Mandalay, and not far from the Irrawadi, are oil-wells, which

were the principal sources of petroleum before the discovery of oil-wells in North America. On the borders of Siam and Cambodia is an immense lake called Tali Seb, the type of smaller ones in the same region, all remarkable for fluctuating with the rise and fall of the Mekong, to such a degree that they are, in relation to it, alternately feeders and fed. The Tali Seb fisheries are the most productive of the kind in the world. On the Siamese side of the lake, but in a province that was once Cambodian, are the most extensive and the most elaborately decorated architectural remains on earth, the temple of Nakhon Wat. About three miles from the temple are the ruins of a city, 24 miles in circumference, which was the capital of a Cambodian kingdom from the tenth century to the thirteenth. Cambodia gives name to *gamboge*, a gum-resin obtained from the leaves and twigs of a tree indigenous to a district which is now Siamese.

EXERCISES.

What countries are included under the name Indo-China? Name the chief towns in each. Name the gulfs, rivers, and capes.

Between what degrees of latitude and longitude is Indo-China situated? What are its length and breadth? Describe its surface. Where are its rice-granaries? What do the forests yield? What beasts haunt them? Where has the white elephant a state establishment? Describe the inhabitants. What religion prevails? Where is that religion modified as in China? What race is Mohammedan? Which of the Indo-Chinese countries has the largest area, and which the greatest population? Which three of them are French protectorates? Which three of them contain tribes more or less independent? Where is the Shan and Laos country? Where are the Karens? Name the Indo-Chinese river which is most useful for navigation. What makes Bamo an important station on it? Where are there oil-wells? Give an account of Tali Seb lake. What is Nakhon Wat? What is *gamboge?*

THE CHINESE EMPIRE

Is bounded N. by Asiatic Russia; W. by Asiatic Russia, Afghanistan, and India; S. by India, Independent Burma, Anam, and the China Sea; E. by the Pacific Ocean, the Yellow Sea, and Corea. It consists of:—

	Square Miles.	Population.
China Proper, . .	1,554,000	405,000,000
Dependencies—		
Manchooria, . .	367,000	12,000,000
Mongolia, .	1,304,000	2,000,000
Dzungaria, .	156,000	600,000
Eastern Turkestan	432,000	580,000
Tibet, .	652,000	6,000,000
	4,465,000	426,180,000

1. CHINA

Is bounded N. by Mongolia and Manchooria; W. by Mongolia, Tibet, and Independent Burma; S. by Independent Burma, Anam, and the China Sea; E. by the Yellow Sea and the Pacific Ocean. The provinces of the mainland, with their chief towns, are:—

Provinces.	Chief Towns.	Provinces.	Chief Towns.
Pe-chi-li	PEKIN.	Yun-nan	Yun-nan.
Shan-tung	Tsi-nan.	Kuei-choo	Kuei-yang.
Kiang-su	Nankin.	Se-chu-en	Ching-too.
Ngan-hoei	Ngan-king.	Shen-si	Si-ngan.
Che-kiang	Hang-choo.	Shan-si	Tai-yuen.
Kiang-si	Nan-chang.	Ho-nan	Kai-fong.
Fo-ki-en	Foo-Choo.	Hoo-pe	Voo-chang.
Quang-tung	Canton.	Hoo-nan	Chang-cha.
Quang-si	Quei-ling.	Kan-su	Lan-choo.

Islands.—Hainan, Hiang-shan (partly Portuguese); Hong-kong (British).

Gulfs.—Tonquin, Pe-chi-li, Leao-tong, Corea Bay.

Mountains.—Pe-ling range, N. of the Yang-tse-kiang; S. of it, Miao-ling, Nan-ling, Me-ling, and Ta-yu-ling.

Lakes.—Toon-ting, Poyang, Tai, Hong-tse, all connected with the lower Yang-tse-kiang.

Rivers.—Si-kiang; Yang-tse-kiang, or Blue River; Hoang-ho, or Yellow River; Pei-ho, or River of Pekin.

REMARKS.

China, properly so called, extends from 20° to 42° N. lat., and from 98° to 123° E. long. Its greatest length from N. to S. is about 1600 miles; its breadth varies from 900 to 1300 miles.

Of the twin rivers, Yang-tse-kiang and Hoang-ho, the former is a blessing; the latter, because of its disastrous floods, is a curse to the country. The Hoang-ho flowed into the Yellow Sea, to which it imparted its own colour, till the floods of 1851–3, when it scooped out for itself a new channel, by which it now flows into the Gulf of Pe-chi-li; it is of little use for navigation. The Yang-tse-kiang, on the other hand, is navigable by ocean steamers for 1000 miles to I-chang; its banks yield rice in the warm season, and wheat in the cold one; and the hills on its southern tributaries are verdant with the tea-shrub. Both rivers are crossed by the Grand Canal, which runs from Hang-choo, opposite Chusan Island, northwards to Lintsing, whence, by an affluent of Pei-ho River, it communicates with Pekin. On either side of the Canal, along its

whole length of 700 miles, spreads a rich alluvial plain, a granary of rice. The country along the lower reaches of the Yang-tse-kiang is amphibious with lakes and canals; waterways are there the principal means of communication. Population is densest in the alluvial plain, and in the comparatively small basins of the Pei-ho and Choo-kiang rivers; and it presses so close on the means of subsistence that these are augmented by every conceivable means. Woods are tolerated only where human food cannot be grown; pasture is confined to hilltops; the hillsides are terraced up to the limit of cultivation; whatever can serve as manure is carefully collected; so is water on the higher grounds, and water-courses are made wherever irrigation would increase fertility; spade-husbandry is universal; ponds and rivulets are utilized for the water-chestnut; the lakes themselves are fished with the aid of the cormorant; and creatures we call vermin are used for food.

China is the only great pre-Christian power which survives; and it is still one of the greatest. Confucius, its great moralist, was born B.C. 551. The period of feudalism ended B.C. 247, when a Chinese Julius Cæsar established a regime such as has ever since existed. In the 13th century, Mongolian hordes over-ran the country, and established a dynasty of their own; but in the following century they were overpowered, and a native dynasty succeeded. Then it was the Chinese commenced building, by way of bulwarks against these hordes, their Great Wall, 1400 miles long, which, running inland from the Gulf of Pe-chi-li, in a great bend round Pekin, and crossing twice the Hoang-ho, ends in an elevated and inhospitable region, near where the 40th parallel crosses the 100th meridian. In the 17th century, a small but well-led tribe of Manchoo Tartars conquered China, just as a small army of Normans conquered England in 1066; and the dynasty established by them is still on the throne. It is the glory of this dynasty to have completely re-established Chinese authority over the great central plateau of Asia, feebly exercised and sometimes completely suspended as that authority had previously been. The Chinese Empire of to-day is inferior to both the British and the Russian in area, but it is more populous than either. The family is the model of government, which may be described as a paternal despotism. Family worship, too, if the decoration of the family tomb and prayers to deceased ancestors may be so called, is both the universal and the most genuine expression of Chinese religious feeling. A modified Buddhism prevails.

The civilisation of the Chinese is the most conservative in the world. They still write and print with upwards of 20,000 characters, which represent not any sounds in particular, but certain ideas; so that, though the inhabitants of distant provinces cannot understand one another's speech, the written language is the same for all. They still resist the introduction of railways, in the interest, it would appear, of the multitudes who live by the carrying trade on river, canal, and road. The coal measures, especially

those of the Yang-tse-kiang basin, are understood to surpass even those of the United States of North America ; yet European tools and methods, by which they could be worked to greater advantage, are declined. Only in the war department have European appliances, by both sea and land, been thoroughly appropriated. On the other hand, they have for ages set us an example, which we are only now imitating, by making public appointments according to the results of competitive examination. So far is this principle carried, and so highly esteemed are letters, that any such institution as a school board is unnecessary ; the family feeling leads even the humblest parents to get their children taught letters, as a means of success in the world. Industry is the great virtue of the Chinese people ; opium smoking is their vice, as dram-drinking is ours.

The Chinese are highly gregarious, preferring to live in towns and villages, rather than in isolated dwellings ; and it says much for their good nature that, with little police supervision, street disturbances are rare. Accordingly China is a country of large towns. Four of them are credited with a population of a million or more ; but the capital is not one of these. Chinese streets are narrow, crooked, and dirty ; and all the large towns are alike by containing a special enclosure, within which the officials reside, and by being surrounded with a wall and ditch. The outer wall of **Pekin** is of clay faced with brick, about 40 feet high, and 12 feet broad on the top, which is paved, and serves as a promenade for riders as well as pedestrians. The circuit is 25 miles. Inside, the city consists of the northern or Manchoo city, within the innermost enclosure of which is the Imperial Palace ; and the southern or Chinese city. Pekin has a summer like that of Naples, in the latitude of which it nearly is, but a winter like that of Stockholm ; and this illustrates the climate of China proper generally, which is one of extremes.

Hong-Kong Island, at the mouth of Canton River, and part of Kaulung peninsula on the opposite mainland, form a British possession of great importance for trade. Capital, Victoria, with a magnificent harbour. Macao, a trading-station of the Portuguese, occupies a corner of Hiang-shan island in the estuary called Canton River.

2. MANCHOORIA

Is bounded N. and E. by Asiatic Russia ; W. by Mongolia ; S. by China, the Gulf of Leao-Tong, Corea Bay, and Corea.

Chief Towns.—Mookden, Kirin, Tsitsikar.

REMARKS.

Manchooria is a mountainous country, well watered and fertile, with a climate like that of Canada, though in the latitude of southern Europe. The industrious Chinese have overflowed into

this territory, so that the southern half of it resembles in every respect, populous cities included, the adjacent provinces of China proper. The northern half is accessible to Russian influence; and Russian steamers now ascend the Sungari, and its tributary the Nonu, to Tsitsikar. The Manchoos dislike settled industry; they are fond of hunting, and some of them are even nomadic.

3. MONGOLIA

Is bounded N. by Asiatic Russia; W. by Dzungaria and Eastern Turkestan; S. by Tibet and China proper; E. by Manchooria.

Chief Towns.—Oorga, Maimatchin, Kookookhoto.

REMARKS.

Mongolia may be described as a tray of saucers, bounded by the Altai mountains on the W. and N., while in the E. and S. the tray is more often traversed than bounded by the Khingan and Inshan ranges. The largest depression is the desert of Gobi, a region of low rocky hills, with intervening spaces of rocky or stony surface, the scanty vegetation of which is described as weeds, scrub, and heath. By gaps in the mountain rim on the north, some drainage is carried off to the rivers Amoor and Yenisei: Kosgol, for instance, the largest of the Mongolian lakes, discharges, by the Selenga and Angara, into the Yenisei. But most of the drainage never escapes from the tray, flowing into lakes without outlet and salt, which lie at the bottom of the saucers. That portion of Mongolia which lies south of the Kan-su province of China proper belongs physically to the Tibetan tableland: it contains the head waters of the Hoang-ho, and is known as the Koko-Nor country, from the largest of its many lakes without outlet. The Mongolian summer is short and very hot, the winter long and very severe. The Chinese, overflowing into eastern Mongolia, have managed to grow there wheat, millet, oats, and opium. The Mongols proper live in tents, wandering in quest of pasture for horses and sheep in the north, for camels and goats in the south. The Mongol language is a mixture of Chinese, Tibetan, and Turkish. The religion professed is the same sort of Buddhism that exists in Tibet; here, as there, the number of monks is excessive. **Oorga**, the largest town, contains about 40,000 inhabitants, of whom 10,000 are monks: it is a great place of pilgrimage, because the abbot is supposed to be a divine incarnation.

4. DZUNGARIA

Is bounded on the N.W. by Asiatic Russia; on the N.E. by Mongolia; S. by Eastern Turkestan.

Chief Towns.—Kurkara-ussu, Kuldja.

REMARKS.

Dzungaria is a mountain oasis, sloping westward. The Irtish carries some of its drainage to the Arctic Ocean by the Obi; but most of it goes by the rivers Emil and Ili to lakes without outlet in Asiatic Russia. Winter lasts only two months; and the soil, without irrigation near the mountains, and with it elsewhere, is exuberantly fertile, yielding rice and wheat, fruits and cotton. The town of **Kuldja**, on the Ili, where that river is already more than a mile broad, stands amid orchards. In Dzungaria, Buddhism and Mohammedanism meet: the Chinese military settlers and the Kalmucks are Buddhists; the Kirghiz are Mohammedans. About half the population are nomads.

5. EASTERN TURKESTAN

Is bounded N. by Russian Territory, Dzungaria, and an outlying portion of China proper; W. by Russian Territory and Afghanistan; S. by India and Tibet; E. by the country of the Koko-Nor Mongols, and Kan-su province of China proper.

Chief Towns.—Kashgar, Yarkand, Ilchi.

REMARKS.

Eastern Turkestan is a mountain saucer, with Lake Lob at the bottom, into which flows all the drainage. Around and east of this lake, the surface is really part of the desert of Gobi, but the western third of the country is fertilized in places by irrigation, from the tributaries of the Tarim. Wheat and rice, fruits and vegetables, cotton and silk, are produced in abundance. The Tarim is frozen over for several months in the year; but the summer is long and hot. Rain seldom falls except near the mountains, and dust clouds aggravate the heat of summer. The population is a mixture of races; the language is a dialect of Turkish; and Mohammedanism is the prevailing religion. There are some nomadic tribes; on the other hand, the three towns above mentioned contain each from 40,000 to 80,000 inhabitants.

6. TIBET

Is bounded N. by Eastern Turkestan; W. by India; S. by India, British Burma, and Yunnan province of China proper; E. by Sechuen province of China proper.

Chief Towns.—Lassa, Gartok.

REMARKS.

Tibet, sometimes called Great Tibet, to distinguish it from Middle Tibet and Little Tibet, which are ruled by the Maharajah

of Cashmere, is the loftiest great table-land in the world, its elevation being about 12,000 feet above the ocean-level. Though it contains the head waters of the Yang-tse-kiang, of the Indus and Sutlej, and of the Brahmapootra, which has been identified with the Sanpoo of Tibet, most of its drainage flows into lakes without outlet. The extreme dryness of the air throughout the year, and the extreme severity of the long winters, are unfavourable to vegetation. Tengri lake, for example, 45 miles by 25 miles, though the water is too salt for drinking, is frozen over from November to May. Woods there are none. Tillage is limited; and the chief wealth of the country consists in domestic animals, the yak or Tibetan ox, the horse, the Cashmere goat, and the sheep. The land so flows with milk and butter, that the Tibetan eats lumps of butter both in his oatmeal porridge and in his tea. The people are of the Mongolian stock, but have a language of their own. Their religion is a form of Buddhism, called Lamaism, from the Grand Lama, the head of it, who resides at **Lassa**, and is worshipped there as the representative of God. The Lamaists practise fasting and auricular confession; they pray to saints, and in their worship use praying wheels, holy water, bells, and rosaries. The monks are numerous and wealthy; the laity poor. At Lassa also resides the Chinese agent, in order to be near the Grand Lama, who is the political as well as the religious head of the country.

EXERCISES.

What are the boundaries of the Chinese Empire? Name the five dependencies of China proper. Which of them is nearly as large as China proper itself? Name the islands, the gulfs, the mountains, the lakes, the rivers.

What are the boundaries of China proper? Between what degrees of latitude and longitude is it situated? What are its length and breadth? Name the provinces of the mainland, and the chief town in each. When and how did the Hoang-ho change its bed? Account for its being deemed a curse, whereas the Yang-tse-kiang is deemed a blessing. What sort of country is that of the lower Yang-tse-kiang? Where does the tea-shrub flourish? Give an account of the Grand Canal, and of the country through which it passes. Describe the industry of the Chinese peasant. What bird is employed in fishing?

Illustrate the antiquity of China as a civilized state. When, and against what enemies was the Great Wall built? Draw a parallel between the establishment of the present dynasty in China and that of the Norman dynasty in England. What is the peculiar glory of the present dynasty? Compare the Chinese Empire of to-day with the British and the Russian. Of what nature is the government? What religion prevails?

Explain the nature of Chinese writing. Why is the introduction of railways resisted? In what department have European methods been frankly adopted? In what respect are we only now imitating the Chinese? How comes it to pass that the family feeling in China does the work of school-boards? What is the great virtue of the Chinese, and what their characteristic vice?

How many cities are there in China with a population of a million or more? Describe a Chinese city. Mention a fact in city-life which speaks volumes for the sweet-bloodedness of the people. Describe Pekin. What is its climate, and that of China proper generally? Name the European possessions on the coast.

What are the boundaries of Manchooria? Name its chief towns. Describe the surface and climate. What portion of it has been thickly settled by the Chinese? What is the favourite pursuit of the Manchoos?

What are the boundaries of Mongolia? Name the chief towns. What is its configuration? What province of China proper divides it into two? By what three rivers does some of its drainage escape to the ocean? What becomes of the rest? Describe the climate. What part of Mongolia has been settled by the Chinese? What crops are raised there? How do the Mongols proper live, and wherein consists their wealth? What of their language? What of their religion? Compare the number of monks in Oorga with its whole population. What makes that town a great place of pilgrimage?

What are the boundaries of Dzungaria? Name its chief towns. Describe its surface. By what river does some of its drainage reach the Arctic Ocean? What two of its rivers flow into lakes without outlet? What of its climate, soil, and produce? Illustrate the statement that Buddhism and Mohammedanism meet in Dzungaria.

What are the boundaries of E. Turkestan? Name its chief towns. What is its configuration? Contrast the eastern portion with the western. Enumerate the productions of the latter. Describe the climate. What of the language? What religion prevails?

What are the boundaries of Tibet? Name the chief towns. Why is this country sometimes called Great Tibet? What is its distinction physically? Name four great rivers which rise within it. What becomes of most of its drainage? Illustrate the severity of its long winter. Wherein consists the chief wealth of the inhabitants? What use do they make of butter? Why is the Buddhism of Tibet called Lamaism? What practices have Lamaists in common with Roman Catholics? Mention four of the appliances used in worship. Who are the two most important personages in Lassa?

COREA

Is bounded N. by Manchooria; W. by Manchooria and the Yellow Sea; S. by Corea Strait; E. by the Sea of Japan. Its area is estimated at 87,760 square miles. Population, about 8,500,000.

Chief Towns.—King-ki-tao or Sé-Oul, Ping-Yang.

REMARKS.

Corea is a peninsula lying between 33° and 43° N. lat., and 124° and 130° E. long. It has been called the Italy of the east, resembling as it does the Italy of Europe in size and climate, in being

traversed lengthwise by a range of mountains corresponding in position and height to the Apennines, and in being separated from the continental mainland by a mountainous region similar to the Alps, and containing a Mont Blanc under the name Pe-ten Shan, *i.e.*, White Head Mountain. In respect of letters, religion, government, and exclusiveness, the Coreans resemble the Chinese; in person they are more like the Japanese.

EXERCISES.

What are the boundaries of Corea? What is its extent in square miles? What is its population? Name its chief towns. Between what degrees of latitude and longitude is it situated? Illustrate the statement that it is the Italy of the east. In what respects do the Coreans resemble the Chinese; and in what respect the Japanese?

JAPAN

Is bounded N. by La Perouse Strait; W. by the Sea of Japan, Corea Strait, and the Eastern Sea; S. and E. by the Pacific Ocean. It is supposed to contain about 150,000 square miles, and a population of 34,338,000.

Principal Islands.	Chief Towns.
Niphon	TOKIO, Kioto, Osaka, Yokohama, Kanagawa, Simonosaki, Hiogo, Niigata.
Kiusiu	Nagasaki, Kagosima.
Sikok	Tosa.
Yesso	Matsmai, Hakodadi.
Minor Groups	Kurile, Loo-choo, Majico-Sima, Bonin.

REMARKS.

The Japan Isles, with their dependencies, lie between 26° and 51° N. lat., and between 123° and 156° E. long.

These islands, excepting the Bonin group, lie in one line of volcanic action; they are hilly, and their culminating point is the dormant volcano of Fusi-yama, in Niphon, 12,000 feet high. The climate varies from that of Siberia in the north to that of the Mediterranean in the south. Hence great variety of produce; grain of all kinds, pulse, tea and sugar-cane, cotton and silk. One of the native trees yields a varnish so superior, that the application of such varnish to the surface of wood and metal is called *japanning*. The industry of the people, a mixed race, but Mongoloid on the whole, makes amends for comparative poverty of soil. The rivers, invaluable for irrigation, are of no use to commerce, and the roads are bad; but railways and telegraphs are being extended, and a post-office is at work on the European model. Unlike the Chinese, the Japanese have welcomed

European improvements. In the army, they have adopted the German system: in the schools, which are graded from the most elementary up to the university, with technical and normal schools in between, they have imitated the United States. It appears, however, from statistics, which, in farther imitation of Christendom, the government collects, that in spite of a compulsory law, not half the number of children of school age are in actual attendance. The Japanese have a language of their own, but their literature and their Buddhism are Chinese. The government is an absolute hereditary monarchy, Mikado being the title of the sovereign. His capital, **Tokio,** is a large city, with straight well-kept streets, crossing each other at right angles. The houses, with outside walls of bamboo and cement, with partitions of paper on wooden frames, and almost without furniture, are mostly of one story, and detached, because of frequent earthquakes. Tokio has its fire-brigades and its police-offices connected by telegraph; and at night it is brilliant with gas. A railway connects it with Yokohama, its port. Factories for the manufacture of woollens, cottons, paper, and glass, have been set up with machinery from Europe or America. Silks from the native loom have long enjoyed a world-wide celebrity; and Japanese porcelain is preferred by many to that of China. Yesso yields coal and iron; West Niphon, copper and petroleum.

EXERCISES.

What are the boundaries of Japan? What is its extent in square miles? What is its population? Name the four principal islands. Name the four minor groups. Where are Nagasaki, Kanagawa, Tokio, Kioto, Matsmai?

Between what degrees of latitude and longitude are the Japan Isles and dependencies situated? What is the general character of the surface? What and where is the highest mountain? What of the climate? Enumerate the productions. What of the rivers and roads? In what particulars have the Japanese imitated the improvements of Christendom? In what department has Germany been their model? In what department have the U.S. of N. America been their model? What school difficulty is experienced in Japan as in Europe? What of the language, literature, and religion? Of what nature is the government? Describe the capital. Describe the houses. Mention particulars in which the capital of Japan resembles the cities of Europe. What manufactures are carried on with European machinery? What articles of native manufacture are highly esteemed? How came the art of japanning to be so called? Which of the islands yields coal and iron? Where are copper and petroleum found?

DESCRIPTIVE TABLE.

Ak-su, a town of Eastern Turkestan, with considerable trade. Pop. estimated at 50,000.

Amarapura, *A-mä-rä-poor'ä* (the city of the gods), a former capital of the Burman Empire, situated on the E. bank of the Irrawadi; now in ruins.

Amoy, a seaport of China, situated on an island on the coast of Fo-ki-en,

with an excellent harbour. Pop. 300,000.

Anam′, or **Annam′**, **Empire of** (the peace of the south), a country of S.E. Asia, bounded on the N. by China, E. and S. by the Gulf of Tonquin, Chinese Sea, Cambodia, and French Cochin-China, W. by Laos and Siam. It lies between 10° 47′ and 23° N. lat., and 102° and 109° E. long., and is about 980 miles in length, with a breadth varying from about 80 to 300 miles. Its area has been variously computed at from 98,000 to 140,000 square miles, with a population of about 21,000,000. France exercises protectorate powers over Anam.

Ava, *ä′vä*, a city of the Burman Empire, once its capital, but now in ruins.

Bankok′, the capital of Siam, on the Menam. The houses are built upon bamboo rafts moored along the banks. Pop. 500,000, of whom about one-half are Chinese.

Bhamo′, a town of Burma, on the Irrawadi; its chief trade is with China. Pop. about 10,000.

Bur′ma, or **Bur′mah**, a state of the Eastern or Indo-Chinese Peninsula, between 19, 29 and 27 N., and 93 and 102 E. The greater part of the country consists of the immense basin of the Irrawadi and its tributaries. It is mountainous in the W., N., and N.E., and level in the S. and S.E. It has valuable mines of gold, silver, copper, tin, lead, antimony, and iron, besides a great variety of precious stones. Teak is abundant. Estimated area 190,500 square miles; pop. 4,000,000.—The capital is **Mandalay**, on a plain 3 miles from the Irrawadi.

Cambo′dia, a maritime country of Asia, in the Eastern or Indo-Chinese Peninsula, to the S.E. of Siam, with which and with Anam it was incorporated about the close of the last century. In 1863, in consequence of French interference, it was severed from Siam and Anam, and became a protectorate of France, but its area is much less than it was in former times. Its present length is not more than 270 miles; breadth 150 miles; and pop. about 1,000,000. The former power and splendour of the country are attested by the vast ruins of magnificent temples, palaces, walled cities, etc. The present capital is **Panomping**.

Canton′, a city of China, the capital of the province of Quang-tung, on the Choo-Kiang, Canton, or Pearl River, 70 miles from its mouth in the China Sea. Here, for 4 or 5 miles, barges are moored in the river, in which thousands of persons live who have no other home. Pop. estimated at 1,500,000.

Chang-cha′, a city of China, the capital of the province of Hoo-nan.

Changchow-foo′, a large city of China, province of Fo-ki-en, 36 miles S.W. of Amoy, which is its port. Pop. estimated at 1,000,000.

Che-kiang, *che-ke-ang′*, a province of China, N. of Fo-ki-en, on the E. coast. P. 8,100,000.—Chief town, **Hang-chow**.

Ching-too, a commercial city of China, the capital of the province of Se-chu-en.

Choo-kiang, the Chinese name for the Canton River.

Chung-king, a city and river port of China, province of Se-chu-en, at the confluence of the Kia-liang with the Yang-tse-kiang. It is one of the most populous cities in China.

Chusan, *choo-sän′*, one of a group of fertile islets off the coast of China, near the mouth of the Yang-tse-kiang. Pop. 200,000.

Cochin-China, Lower, or French, a territory occupying the S. extremity of the Indo-Chinese Peninsula, belonging to France. It is the delta land of the Mekong River, and is divided into six provinces, viz., *Saigon*, *Mytho*, *Bienhoa*, *Vinh-long*, *Chaudoc*, and *Hatien*. Area, 21,717 sq. m.; pop. 1,593,000.

Core′a, a peninsula of E. Asia, separated from China by the Yellow Sea, and from the islands of Japan by the Strait of Corea and the Sea of Japan. It is about 500 miles long and 150 miles broad. The coast-line is elevated, and the interior is traversed from N. to S. by a chain of mountains. The climate is severe, but the soil is fertile and well cultivated. The Coreans are an exclusive people, and possess a literature of their own. Commerce is carried on with China (which exercises over it a slender suzerainty) and Japan. The government is despotic. Area estimated at 87,760 square miles; pop. about 6,840,000.

Dzungaria, *dzoon-gä′re-ä*, or **Soongaria** (Chinese *Thian-shan-pe-loo*), a region of Central Asia, forming part of the Chinese Empire. It is watered by the Ili, and is bounded on the W. by Siberia, N. and E. by Mongolia, and S. by Eastern Turkestan. In 1871, Russia occupied the fertile valley of the Upper Ili, with the town of Kuldja, but in 1879 restored most of the province to China. Pop. 600,000.

Fo ki-en, *fo'ke-en*, a maritime province in the S.E. of China. It abounds in grain and fruit, and the tea-plant is cultivated to a great extent. Pop. 14,777,000.

Foo-Choo', a large city of China, capital of the province of Fo-ki-en, on the Min-kiang, which is here crossed by a stupendous bridge. Pop. estimated at 630,000.

Formo'sa (beautiful, it was so called by the Portuguese, the Chinese call it *Tai-wan*), a large and fertile island in the Chinese Sea, opposite the province of Fo-ki-en. It is 250 miles in length by 80 miles in breadth. Pop. about 2,000,000.

Go'bi, called also **Shamo** by the Chinese, a great stony desert of Central Asia, comprising a considerable part of Eastern Turkestan and Mongolia. Its length from E. to W. is about 1500 miles; its breadth varies from 500 to 700 miles.

Hainan, *hi-nân'* (south of the sea), Chinese *Hai-Lam*, a large island in the Chinese Sea, 180 miles in length and 80 miles in breadth. It is situated at the E. extremity of the Gulf of Tonquin, and is separated by a narrow channel from the Chinese province of Quang-tung, to which it belongs. Area estimated at 12,000 square miles; pop. 1,500,000.

Hang-choo', or **Hang-tcheou**, *hang-chee-oo'*, a city of China, the capital of the province of Che-kiang, and one of the finest cities in the empire; it is situated on a navigable river at the southern termination of the Grand Canal, and has an extensive trade in raw silks and teas. Pop. estimated at 800,000.

Hankau, or **Hankow'** (mouth of commerce), a city of China, province of Hoo-pe, at the confluence of the Han-kiang and the Yang-tse-kiang; it is one of the greatest commercial centres in the world, and has been described as a Birmingham, a Liverpool, and a Sheffield all rolled into one. Pop. estimated at 600,000.

Han-kiang', a river of China, which, after a tortuous course of about 600 miles, joins the Yang-tse-kiang at Han-yang. — Also, a river of Corea, which flows into the Strait of Corea.

Hankin, *hân-keen'*, a maritime town on the E. coast of Corea.

Hanoi. *See* **Kesho**.

Hiogo, *he-o'go*, a seaport of Japan, on the S.W. coast of the island of Niphon, at the head of the Gulf of Osaka. Pop. 30,408.

Hoang'ho (the yellow river), a large river of China. Rising in the Koko-Nor country of the Mongols, and pursuing a circuitous course of 2600 miles through some of the finest provinces of China, it falls into the Yellow Sea in 34 N. and 120 E.

Ho'ang-Shan, a mountain in the province of Nganwhi, China.

Ho-nan (south of the river), a central province of China, watered by the Hoang-ho. It is so fertile as to be called the "Garden of China;" but in 1877–78 a long-protracted drought baked large areas of the country to the consistency of brick, and occasioned a most calamitous famine, during which hundreds of thousands of the population died of starvation. Pop. estimated at 23,000,000.

Hondo, *See* **Niphon**.

Hong-kong, a small island at the mouth of the Canton River, ceded by the Chinese to the British in 1842. It is about 37 miles from Macao, and 100 miles from Canton. Area 32 square miles; pop. 160,402. — **Victoria**, the capital, was founded in 1842.—22, 15 N. 114, 18 E.

Hong-tse, an extensive lake in the province of Kiang-su, China.

Hoo-nan' (south of the lake), so named from its situation S. of Lake Tong-ting), a province of China, W. of Kiang-si. It is hilly, but fertile, and is rich in minerals. Pop. estimated at 18,700,000.

Hoo-pe, *ho-pa'* (north of the lake, *i.e.*, of Lake Tong-ting), a province of China, S. of Ho-nan, and N. of Hoo-nan and Kiang-si. Pop. estimated at 27,400,000.

Hué, *hoo-ā'*, or *hwā*, the capital of the empire of Anam, on a navigable river about ten miles from its mouth in the China Sea. It is strongly fortified, and surrounded by a double ditch and brick wall, 60 feet in height. Pop. about 100,000.

Ili, *e'le*, a river of the province of Kuldja, Central Asia; it rises in the Thian-Shan Mountains, flows W. past the town of Kuldja, and after a course of about 600 miles falls into Lake Balkash.

Irrawa'di (originally *Erivati*, the great river or father of waters), one of the great rivers of S.E. Asia; it has its source in Tibet, flows through the entire extent of the Burman Empire and the division of Pegu, and, after

branching into an immense delta, falls by numerous mouths into the Bay of Bengal, E. of Cape Negrais. Its length is estimated at 1200 miles.

Japan, Sea of, between the islands of Japan and the E. coast of Corea.

Jesso, or **Yes'so,** a large island of Japan, N. of Niphon, from which it is separated by the Strait of Sangar. Estimated area 62,500 square miles; pop., with the Kuriles, 163,355.

Kagosima, *kä go-se'mä,* a town of Japan, on a deep bay at the S. end of the island of Kiusiu. Pop. estimated at 180,000.

Kai-fong, *ki-fong',* a city of China, the capital of the province of Ho-nan, on the Hoang-ho.

Kan-su', a long, straggling Chinese province, stretching from the N.W. of China proper to Dzungaria. It produces gold, mercury, silks, dyes, musk, and tobacco. Area 400,000 square miles: pop. 9,285,377.

Kashgar', or **Cashgar',** a town of Eastern Turkestan, Central Asia, on a river of the same name, with important manufactures of gold and silver cloths, etc.

Kesh'o, Ketch'o, or **Cacha'o,** or **Hanoi,** a city of Anam, in the Indo-Chinese Peninsula, the capital of Tonquin, on the River Sang-koi, about 100 miles from its mouth; it exports bullion, silks, and lacquered wares. Pop. 120,000.

Khamil, *kä-meel',* or **Hami,** *hä-me',* a town of Eastern Turkestan, in a fertile and well-cultivated district, N.E. of Lake Lob Nor.

Khotan', a province of Eastern Turkestan. Pop. 250,000.—**Khotan** or **Ilchi,** the capital, is an important place. Pop. 40,000.

Kiang-si, *ke-äng-se'* (west of the river), a province of China, W. of Che-kiang and Fo-ki-en. It is traversed by the *Kan-kiang* and bordered by high mountains, many of which are cultivated to the very top. Pop. 23,000,000.—**Nan-chang** is the capital.

Kiang-su', a maritime province of China, N. of Che-kiang, and S. of Shan-tung. Pop. 37,800,000. The capital is **Nankin.**

King-ki-ta'o, Han-Yang', or **Sé-Oul,** *sä-ool',* sometimes written **Sŏul,** the capital of Corea, and the residence of the sovereign, near the middle of the kingdom. Pop. estimated at 240,000.

Kiong-Choo', a maritime city of China, capital of the island of Hainan, on its N. coast. Pop. estimated at 100,000.

Kioo-Sioo. *See* **Kiusiu.**

Kio'to, till 1868 called **Miaco,** a city of Japan, towards the S. end of the island of Niphon; it was the former residence of the Mikado, and has suffered from his removal to Tokio, but it maintains its reputation for silks, bronzes, lacquer-work, etc., and is still the headquarters of literature, science, and art in Japan. Pop. 229,810.

Kiria, *kir'e-a,* a town of Eastern Turkestan, 138 miles E. of Khotan.

Kirin Oola, *kir'en oo'lä* or *ke-reen' oo'lä,* a town of Manchooria, on the Soongari.

Kiusiu, or **Kioo-sioo,** *ke-oo'se-oo',* or **Ximo,** *ze'mo,* the southernmost of the three principal islands of Japan, separated from Corea by the Strait of Corea, and from the island of Niphon by the Strait of Sikok. Area, 15,636 square miles; pop. 5,212,997.

Kos'gol, the largest lake of Mongolia; it is 150 miles long and 40 miles wide.

Kuei-choo, or **Quei-chow,** *kwä-choo',* a province in the S.W. of China; it is very mountainous, and contains mines of gold, silver, vermilion, and iron. Pop. 5,300,000.—**Kuei-yang** is the capital.

Kuen-lun, *kwen-loon',* a range of mountains in E. Asia, separating Tibet from Eastern Turkestan.

Kuldja, *kool'jä,* a province and town of Dzungaria, Central Asia, belonging to China, to the N. of Eastern Turkestan. Pop. of province, 130,000; of town, 10,000.

Kurile Islands, *koo'ril,* a long range of small islands belonging to Japan off the E. extremity of Asia, and extending 700 miles from Kamtschatka to the island of Yesso.

Lanchang', a town of the Laos country, in the Indo-Chinese Peninsula, on the Menam-kong; it is described as a large and handsome place, enclosed by a ditch and a lofty wall.—15, 40 N. 104, 30 E.

Lan-choo', a city of China, the capital of the N.W. province of Kansu, on the Hoang-ho.

La'os, a mountainous country in the Indo-Chinese Peninsula, surrounded by Burma, Siam, Anam, and China, and inhabited by various tribes known by the name of the Shans. The great river Menam-kong traverses it from N. to S. Pop. estimated at 1,000,000.

Las'sa, or **H'las'sa** (land of the Divine Intelligence), the capital of Tibet, on an affluent of the Sanpoo; it is the residence of the Dalai or Grand Lama, and is a place of large trade in silk, wool, goats' hair, velvet, and precious stones. Pop. 25,000. *See* REMARKS, page 300.

Leao-tong, *lā-ā'o-tŏng*, a province of the Chinese Empire, N. of the Great Wall, nominally comprised in Manchooria. The gulf of the same name is an inlet of the Yellow Sea, 150 miles long and from 70 to 120 miles broad.

Lob Nor, a lake of Eastern Turkestan, on the great caravan-route from Kashgar to China.

Loo-choo', more accurately **Lutchu'**, a group of islands, 36 in number, belonging to Japan, lying between the island of Formosa and the Japan Islands. The principal island, called the *Great Loo-choo*, about 60 miles in length by 12 miles in breadth, has a fertile soil and a fine climate.—26, 30 N. 127, 0 E.

Maca'o, Chinese **Ma-kow'**, a seaport and settlement of the Portuguese on an island at the S.W. entrance of the Canton River, China. Pop. of settlement, 77,230.

Maimatchin, *mi-mă-cheen'* (merchants' town, or place of commerce), a frontier town of Mongolia, in the Chinese Empire, near the Russian town of Kiachta; it is on the caravan-route from Siberia to Pekin, and is one of the chief places of trade between Russia and China. Pop. 5000.

Manasarowar', a lake of Tibet, about 15 miles in diameter, near the source of the Sutlej, considered one of the most sacred of all the Hindoo places of pilgrimage.

Manchoo'ria, or **Mantchoo'ria**, an extensive region of the Chinese Empire, between 39 and 53, 30 N. 116, 30 and 134, 30 E. Pop. estimated at 12,000,000.—**Kirin-Oola** is the capital. *See* REMARKS, page 297.

Mandalay', the capital of the Burman Empire, in the Indo-Chinese Peninsula, on the Irrawadi, N. of Amarapura, but 3 miles inland. Pop. 100,000.

Matsmai, *măts-mi'*, the capital of the Japanese island of Yesso, at the mouth of a river on the S. coast. Pop. 50,000.

Mei-ling Mountains (the chain of the wild plum trees), a range in the S.W. of the province of Kiang-si, China.

Menam, or **Meinam**, *mā-nam'* (mother of waters), a river in the Indo-Chinese Peninsula, supposed to rise in the mountains of Yun-nan in China; and, after a course of about 800 miles, enters the Gulf of Siam below Bankok.

Menam-kong, *mā-năm-kong'*, or **Me-kong'** (mother of rivers), a large river in the Indo-Chinese Peninsula, supposed to have its source in the mountains of Tibet; it passes through the Chinese province of Yun-nan; and, after traversing Laos and Cambodia, falls into the Chinese Sea.

Mongo'lia, an extensive region of the Chinese Empire. Estimated area, 1,301,000 square miles; pop. about 2,000,000. *See* REMARKS, page 298.

Mookden', or **Moukden'**, or **Chin-yang**, *shin-yăng'*, a town of Manchooria, in the Chinese Empire, the old capital, where the Chinese emperors and their families are still buried.

Nagasa'ki, a seaport of Japan, on an inlet of the W. coast of Kiusiu, one of the oldest cities of the empire, and the nearest port to China. Pop. 46,661.

Nan-chang, a city of China, the capital of the province of Kiang-si, on the Kan-kiang; it is a great seat of the porcelain manufacture. P. 300,000.

Nanche, *năn-chā'*, a town of China, province of Che-kiang; it is about 3 miles in circuit, and carries on an extensive trade. Pop. about 200,000.

Nankin', or **Nanking** (the court of the south, or the southern capital), a city of China, at one time the capital of the empire, and still the capital of the province of Kiang-su; it is situated near the S. bank of the Yang-tse-kiang, about 100 miles from its mouth. It communicates by the Grand Canal with Pekin, and is still considered the chief seat of learning in the empire. Pop. about 450,000.

Nan-ling' (the southern mountains), a lofty chain in China, extending 1300 miles from E. to W. between the provinces Kuei-chow, Hoo-nan, and Kiang-si on the N., and those of Quang-si and Quang-tung on the S.

New-chang', a city of the province of Leao-tong, Manchooria, in the Chinese Empire. Pop. 30,000. Its port, of the same name, is on the Leao-tong River, about 90 miles from the city. Not very many years ago only a few huts occupied the site; now the town lines the river-bank for about 2 miles. Pop. estimated at from 50,000 to 60,000.

Ngan-hoei, *ngán-ho-á'*, or **Ganhway**, *gán-hwā'*, a province of China, traversed by the Yang-tse-kiang. Pop. 34,000,000.—**Ngan-king** is the capital.

Nha-Trang', or **Yatrang'**, a seaport with a good harbour, at the mouth of a river on the E. coast of Anam, Indo-Chinese Peninsula.

Ningpo' (the repose of the waves), a city of China, province of Che-kiang, situated on a tongue of land at the junction of two rivers, about 100 miles S. of Shanghai. Pop. 260,000.

Niphon' (mountain or source of light), called also **Hondo** and **Honjiu**, *hon-jē'oo* (the mainland), the principal island of Japan. It is very irregular in shape. Its length is about 850 miles; its breadth varies from 200 to 240 miles; and its area is estimated at 42,000 square miles. Pop. 27,242,847.

Oorga, Ourga, or **Urga**, *oor'gâ*, the largest town of Mongolia, in the Chinese Empire. *See* REMARKS, page 298.

Osa'ka, a seaport of Japan, in the island of Niphon, 35 miles from Kioto, of which it is the port; it is so intersected by the mouths of the Kamagawa River and by canals as to be called the "Japanese Venice," and was at one time a great commercial city.

Pal'te, a lake in Tibet, which presents the singular appearance of a canal 5 miles broad, surrounding an island about 100 miles in circumference, 30 miles S.W. of Lassa.

Panom'pin, or **Panom'ping**, the capital of Cambodia, Indo-Chinese Peninsula, on the Mekong, at an outlet from Tali Seb lake. Pop. 20,000.

Pei-ho, *pā-ho'* (white river), a river of China, rises in Mongolia, passes near Peking, and, after forming a junction with the Eu-ho, falls into the Gulf of Pe-chi-li.

Peking', or **Pekin'** (the northern capital), situated in the province of Pe-che-li, on the Pei-ho River, about 50 miles to the S. of the Great Wall, is the capital of China, and the modern metropolis of the Chinese Empire. Pop. estimated at 1,500,000. *See* REMARKS, page 297.

Pe-ling', an island, 50 miles long, in the Malay Archipelago.—Also an island in the Yellow Sea, off the W. coast of Corea, Asia.

Pe-chi-li', the metropolitan province of China, bounded on the N. by the Great Wall, and on the E. by the Gulf of Pe-chi-li, an inlet of the Yellow Sea. Pop. 28,000,000.

Poyang', a lake of China, surrounded by finely wooded hills, in the N. of the province of Kiang-si. Length, 80 miles; greatest breadth, 40 miles.

Quang-Ping', a city of China, noted for its numerous temples, in the province of Pe-chi-li, 240 miles S.S.W. of Peking.—Also, a city in the province of Kuei-chow, 80 miles E.N.E. of Kuei-yang.

Quang-si, *kwâng-se'* (the wide west or the western province), a province in the S. of China, W. of Quang-tung, and bordering on Tonquin. Pop. 7,300,000.—**Quei-ling** is the capital.

Quang-tung, *kwâng-toong'* (the wide east or the eastern province), a maritime province in the S. of China; it is traversed by several important rivers, which serve to transport merchandise to Canton, its capital and chief seat of trade. Pop. 19,200,000.

Saghalien Oola, *sâ-gâ-le'an oo'lâ*, a town of Manchooria, in the Chinese Empire, on the Amoor. Pop. 20,000.

Saigon, *si-gon'*, a province of Lower or French Cochin-China, in the S. of the Indo-Chinese Peninsula. Its capital, of the same name, on the River Saigon, contains numerous buildings built in European style. Pop. of province, 291,000.

Saluen, *sâl-wen'*, **Salwin'**, or **Salween'**, or **Thaleain**, a large river of the Indo-Chinese Peninsula, flows E. and S. through the Chinese province of Yun-nan, and S. through Burma, and, after forming the E. boundary of Pegu, falls into the Gulf of Martaban.

Sang-koi, a river of the Indo-Chinese Peninsula, rises in the Chinese province of Yun-nan, and, flowing S.W., falls into the Gulf of Tonquin, after a course estimated at 600 miles.

Sanpoo', or **Sanpu'**, a river of Tibet, rises near the source of the Sutlej, and, flowing eastward, joins the Brahmapootra.

Satsu'ma, a town of Japan, the capital of the province of the same name in the S. of the island Kiusiu; it has productive pearl-fisheries in the *Bay of Satsuma*.

Se-chu-en, or **Sze-chu-en**, a province in the W. of China, diversified by mountains, plains, and deserts, and traversed by the River Yang-tse-kiang. Pop. 35,000,000.

Sé-Oul. *See* **King-ki-tao.**

Shamo. *See* **Gobi.**

Shan States, a number of mountainous states intervening between British Burma and the Chinese frontier. They formerly paid tribute to China and Burma, but are now practically independent. Europeans possess only scanty information concerning them.

Shanghai, *shang-hi′* (supreme court), a seaport of China, province Kiang-su, on the Woosung River, about 160 miles E.S.E. of Nankin; it is the most important commercial city on the coast of China. Pop. 276,640.

Shan-si, *shan-se′* (west of the mountain), a province of China, W. of Pe-chi-li, remarkably rich in coal and iron. Pop. 14,000,000.

Shan-tung, *shân-toong′* (east of the mountain), a province of China, S.E. of Pe-chi-li, terminating in a peninsula stretching into the Yellow Sea. Pop. 29,000,000.

Shen-si, *shen-se′* (the western frontier), an extensive and mountainous province in the N.W. of China, separated from Shan-si on the E. by the Hoang-ho. Area 81,912 square miles. Pop. 10,200,000.

Siam′ (a Malay word signifying "the brown race;" the native name is *T'hai*, or *Muang T'hai*, *i.e.*, "the kingdom of the free;" the Burmese name is *Zoodra*), a country of the Eastern Peninsula, embracing the greater part of the Laos territory, and the portion of the Malay Peninsula that is neither British nor independent, called Lower Siam. Area estimated at 250,000 square miles; pop. about 5,750,000. Siam proper is the valley of the Menam, on which are found the great centres of population, the chief of which is **Bankok**, the capital.

Siam, Gulf of, a great bay of the Chinese Sea, E. of the Malay Peninsula, and W. of Siam, Cambodia, and Cochin China.

Si-an, or **Si-ngan**, a city of China, province of Shen-si, on an affluent of the Hoei-ho. It is large, enclosed by walls, and the principal military depôt for the northern provinces of China.—34, 12 N. 108, 40 E.

Siang-Yang′, a city of China, province of Hoo-pe, on the Hang-Kiang.

Sikok′, **Sikokf′**, or **Shiko′ku**, the smallest of the four principal islands of Japan, N.E. of Kiusiu. Area estimated at 17,200 square miles; pop. 2,618,142.

Sin-ling, a mountainous range in China, S. of Si-ngan, in the province of Shen-si.

Soo-choo a city of China, province of Kiang-su, on the Great Canal, near Lake Tai, 125 miles S.E. of Nanking; it is one of the finest cities in the empire, and is noted for the excellence of its manufactured goods. Pop. 500,000.

Soongari, or **Sungari**, *soon-gâ′re*, or *soon-gâ-re′*, the most important river of Manchooria, in the Chinese Empire, rises near the Corean frontier, and joins the Amoor after a course estimated at 800 miles.

Tai, *ti*, a fine lake in the province of Kiang-su, China.—Also, several cities of China, chiefly in the northern provinces.

Taiwan, *ti-wân′*, a town of China, the capital of the island Formosa, on its W. coast. Pop. 100,000.

Taiyuan, *ti-yoo-ân′*, a city of China, the capital of the province of Shan-si, on the Fuen-ho, 250 miles S.W. of Peking; it is a place of considerable trade, particularly in fine porcelain.

Tan-sia-Shan, a range of mountains in the W. of the Chinese province of Ho-nan.

Teng-chow, or **Tang-chau**, a seaport of China, province of Shan-tung, on the N. coast. Pop. 230,000.

Ten′gri-nor, a salt water lake in Tibet, 50 miles long and from 16 to 25 miles broad, about 120 miles N.W. of Lassa. From its great altitude (15,190 feet above the sea), it is called by the natives *Namcho*, or "Sky Lake."

Teshoo′-Lomboo′, a town of Tibet, S.W. of Shigatze; it consists of from 300 to 400 houses, capable of accommodating from 3000 to 4000 priests, engaged in the service of the Teshu-lama, the ruler of the Tsang province, who resides at Shigatze.

Thian-shan, *te-ân-shân′* (the celestial mountains), a range of lofty mountains in the W. of Mongolia, forming the N. boundary of the great table-land of Central Asia. *Khan Tengri*, the highest peak, is 21,000 feet above the sea.

Thian-shan-nan-loo (the country S. of the celestial mountains), a province of Eastern Turkestan, N. of Tibet.

Thian-shan-pe-loo (the country N. of the celestial mountains). *See* **Dzungaria.**

Tien-tsin, *te-en-tseen′* (heavenly spot), a city and port of China, at the junction of the Yunling and the Peiho rivers. Pop. 950,000.

Tokio, *tō-ke-o*, called **Yed′do** prior to 1868, the capital of Japan, and the

usual residence of the Mikado, situated at the head of a deep bay on the E. coast of the island of Niphon. Pop. 811,510. *See* REMARKS, page 303.

Tong-ting-hoo, a lake of China, 300 miles in circumference, in the province of Hoo-pee, near the border of Hoo-nan.

Tonquin, *ton-keen'*, or **Tongking**, *tong-king'*, the most northerly state of the Empire of Anam. **Kesho**, or **Hanoi**, on the Tonquin River, is the capital. The French exercise protectorate powers over Tonquin.—The **Gulf of Tonquin**, on the E. coast, is 300 miles in length, and has an average breadth of 150 miles.

Tsa-yuen', a large and important town of China, province of Che-Kiang, near which is a curiously-shaped hill chiefly composed of beautiful green granite, which is extensively quarried and exported.

Tsi-nan-foo, a large and populous city of China, the capital of the province of Shang-tung, on the Ta-tsin, 100 miles from the Gulf of Pe-chi-li.

Tsin-chou-foo, a city of China, province of Shang-tung, 80 miles E. of Tsi-nan-foo; it is the centre of a large silk-producing district. Pop. 70,000.

Tsi-tsi-har, the most northerly province of Manchooria, in the Chinese Empire, separated from Asiatic Russia by the Amoor.—The capital, of the same name, is on the River Naun.

Tsu-shima, or **Tsoosima**, *tsoo-sē'mā*, two islands of Japan, in the Strait of Corea; they are separated by a narrow channel. Pop. 30,000.

Turfan, *toor-fān'*, a district and town of Eastern Turkestan, at the foot of the Thian-shan, 180 miles W. of Khamil; the inhabitants are said to abstain rigidly from eating animal food and drinking wine. Pop. of the town 10,000.

Udong, *oo-dong'*, a town of the Indo-Chinese Peninsula, the former capital of Cambodia, on the channel between Tali Seb lake and the River Mekong. Pop. 12,000.

Voo-chang, or **Woo-chang**, a city of China, the capital of Hoo-pe, on the Yang-tse-Kiang at the influx of the Han-Kiang; it is one of the finest cities in China. Pop. 200,000.

Yalou-kiang, a river of the Chinese Empire, separates Manchooria from Corea, and enters the Yellow Sea after a course estimated at 300 miles.

Yang-tchou, a city of China, province of Kiang-su, on the Imperial Canal, 50 miles N.E. of Nanking.

Yang-tse-Kiang (the son of the great water, or the son of the sea), the largest river of Asia, has its source in the mountains of Tibet, traverses all the central provinces of China, and, after a course of 3200 miles, falls into the Pacific Ocean about 100 miles below Nánking.

Yao-nan', a city of China, province of Yun-nan, about 95 miles W.N.W. of Yun-nan, with a great trade in musk and salt.

Yarkand', a river of Eastern Turkestan, rises in the Mouz Tagh, flows E., and falls into Lake Lob Nor after a course estimated at 1230 miles.

Yarkand, a city of Eastern Turkestan, in a fertile plain on the above river 140 miles S.E. of Kashgar; it rivals Bokhara as a seat of Mohammedan learning, having sixty endowed colleges for the study of divinity and law according to the Koran. Pop. estimated at 120,000.

Yellow Sea, **Hoang-hai** or **Whang-hai**, an arm of the Pacific Ocean, between China and the peninsula of Corea, terminating in the Gulfs of Pe-chi-li and Leao-tong.

Yokoha'ma (cross shore), a town of Japan, on the E. coast of the island of Niphon, 17 miles S. of Tokio; it is built after the fashion of a European town, and is the principal seat of foreign settlers in Japan. Pop. 67,499.

Yunnan' (the cloudy region of the south), a mountainous province in the S.W. of China, celebrated as a tea-growing district, and very rich in mineral products. Pop. 5,600,000.

Yunnan, a city of China, the capital of the above province, on the N. side of Lake Tien-chi.

AFRICA

Is bounded N. by the Mediterranean; W. by the Atlantic; S. by the Southern Ocean; E. by the Indian Ocean, the Red Sea, and the Isthmus of Suez. The area is estimated at about 11,556,300 square miles, and the population at about 200 millions.

	Chief Towns.
Countries under Turkish Suzerainty :— Egypt, Tripoli, Tunis.	Cairo, Tripoli, Tunis.
British Possessions :— W. Africa Settlements, Gold Coast and Lagos I., Cape Colony, Natal, St Helena I., Mauritius I.	Bathurst and Free Town, Accra, Cape Town, Pietermaritzburg, James Town, Port Louis.
French Possessions :— Algeria, Senegal, Ivory Coast and Gaboon River, Bourbon or Réunion I.	Algiers, St Louis, Grand Bassam, St Denis.
Portuguese Possessions :— Madeira I., Cape Verde Is., Bissagos Is., with Princes I. and St Thomas I., Lower Guinea, Lower Zambesi and East Coast.	Funchal, Porto Grande, Bissao, Loanda, Mozambique.
Spanish Possessions :— Canary Is., Presidios on Coast of Morocco, with Fernando Po I. and Annobon I. in Bight of Biafra.	Las Palmas, Ceuta.
Independent States :— Morocco, Abyssinia, Zanzibar, Madagascar, Orange Free State, Transvaal or South African Republic, Liberia.	Morocco, Gondar, Shanganny, Tananarivo, Bloemfontein. Pretoria, Monrovia.
Independent Territories :— Sahara, Soudan, Congo Basin, Zululand, Zambesi, Somali.	Agades, Timbuctoo, Nyangwe.

Islands.—Madeira, Canaries, Cape Verdes, Fernando Po, Princes, St Thomas, Annobon, Ascension, St Helena, Ichabo, Madagascar, Comoros, Réunion, Mauritius, Seychelles, Socotra.

Gulfs and Bays.—Aboukir, Sidra, Cabes, Tunis, Guinea (in which are the Bights of Benin and Biafra), Walfisch, Angra Pequena, Saldanha, Table, False, Algoa, Delagoa.

Capes.—Bon, Spartel, Blanco, Verde, Palmas, Three Points. Lopez, Frio, Good Hope, Agulhas, Corrientes, Delgado, Guardafui; Amber and Ste. Marie in Madagascar.

Mountains.—Atlas, Kong, Cameroons, Mossamba, Drakenberg, Lupata, Kilima-Njaro, Kenia.

Rivers.—Nile, Senegal, Gambia, Niger, Ogowai, Congo, Coanza, Nourse, Orange, Limpopo, Zambezi, Rovuma, Rufiji, Jub, Haines.

Lakes.—Tchad; Dembea, Victoria Nyanza, Albert Nyanza; Tanganyika, Bangweolo, Moero, Kamolondo, Chibungo; Dilolo, Ngami, Nyassa, Shirwa.

REMARKS.

Africa extends from 37° 20′ N. to 34° 50′ S. lat., and from 17° 32′ W. to 51° 22′ E. long. Its length, from the Cape of Good Hope to the Mediterranean, on the coast of Tunis, is about 5000 miles; its breadth, from Cape Verde to Cape Guardafui, about 4700. It is separated from Europe by the Strait of Gibraltar and the Mediterranean, and from Asia by the Isthmus of Suez and the Red Sea.

Africa may be described as a peninsula without peninsulas. Its outline is marked not only by the seaboard, but also by coast-ranges never more, and generally much less, than 200 miles from the shore. The best known of these ranges is Atlas, in the western part of North Africa; it is really a mountainous region, with its steeper side towards the Mediterranean, and with summits diminishing from west to east, the highest of all being Mount Miltsin, above 12,000 feet, S.S.E. of the city of Morocco. The coast-ranges are highest on the eastern side. Mont Blanc is equalled by peaks in Abyssinia, and in the coast-range which shuts in Lake Nyassa: it is surpassed by Kenia and Kilima-Njaro, each 18,000 feet high or more, which belong to the coast-range, shutting in the eastmost lake sources of the Nile. Within the coast-ranges, Africa consists of table-lands, from 2000 to 4000 feet above the ocean-level, differing greatly in size, shape, direction of slope, and character of surface. The Sahara table-land, in size and shape like the Mediterranean, cannot be said to slope in any direction, and is an arid desert. Kalahari is its counterpart on a much smaller scale in South Africa. The Soudan is a highly fertile saucer with Lake Tchad at the bottom, into which its rivers flow; but Lake Tchad is still 800 feet above the ocean-level. The Upper Zambezi is a table-land so nearly level that some of the streams connected with Lake Ngami are influents or effluents of the lake according to the rainfall; and at certain seasons the lake communicates with tributaries of both the Zambezi and the Limpopo. In like manner, Lake Dilolo, farther north, is supposed to communicate with tributaries of both the Zambezi and the Congo. Of decided river basins, that of the Nile, long and narrow, is fertile only along the river, till the delta is reached: that of the Congo, circular, or more probably oval in shape, for the northern tributaries are still unexplored, is fertile throughout. The two

basins are alike in having, for the head-waters of their respective rivers, a series of magnificent lakes. But these river basins, sloping the one northwards, the other westwards, are also, except in their seaward portions, table-lands, both rivers reaching the sea through gaps in the great African rim, over a series of terraces which form waterfalls. The lowest cataract on the Nile is about 550 miles from its mouth. Yellala Falls, the limit of ocean navigation on the Congo, are only 142 miles from the Atlantic. The same feature recurs in all the great African rivers, so that not one of them is a natural waterway for ocean steamers into the interior. The equatorial region is not the hottest, because dense forests, nourished by the intertropical rains, protect the surface of the ground from the sun's rays. The hottest region is under the tropic of Cancer, where, there being no rainfall, the sun's rays are intercepted by neither foliage nor cloud. The intertropical coast lands are unhealthy, particularly the coast of Senegambia, as the country of the Senegal and Gambia rivers is called, and the coast of Upper Guinea. The negro race, supposed to be characteristic of Africa, occupies not more than a fourth of it, that portion, namely, which extends along the Atlantic between Senegal and Gaboon rivers, and thence inland as far as the Upper Nile. North and east of this region, the races are white, but of Asiatic type, with a good deal of Arab blood; and they speak dialects of Arabic. Mohammedanism, the religion of these races, is spreading among the negroes, most of whom, however, like the brown races who occupy the rest of Africa, are still Pagans.

EXERCISES.

How is Africa bounded? What is its extent in square miles? What is its population? What three countries in it are under Turkish suzerainty? Name the largest one of the British and French possessions respectively. What possessions have the Portuguese on the mainland? What African possessions of Spain and Portugal have been mentioned as integral parts respectively of the Spanish and Portuguese monarchies? Of the Independent States, which one is wholly insular? Which one is partly insular and partly continental? Name the islands, gulfs and bays, capes, etc. Between what degrees of latitude and longitude is Africa situated? What are its length and breadth? What separates it from Europe and Asia respectively? How is its outline doubly marked? Name and describe the best known coast-range. Name and point out coast-ranges, or summits in them, which are lower than Mont Blanc, equal to it, and higher. Describe the surface of Africa within the coast-ranges. Name the two desert table-lands. Describe the Soudan table-land. What is peculiar about the drainage of the Upper Zambezi in connexion with its two lakes? Contrast the Nile and Congo basins. In what respect are they alike? What fact shows that these river basins are table-lands within the coast-ranges? Account for the equatorial region not being the hottest. Where are the unhealthiest parts? What part of Africa is the habitat of the negro? What kind of races are found north and south of him respectively? What two forms of religion divide native Africa between them?

COUNTRIES UNDER TURKISH SUZERAINTY.

EGYPT.

Countries.	Chief Towns.
Egypt proper................	CAIRO, Boulak, Alexandria, Tanta, Zagazig, Damietta, Rosetta, Port Said, Ismailia, Suez, Kosseir, Sioot, Assouan.
Nubia...........................	Derr, Suakin, Berber, Khartoum.
White Nile Territory.......	Sennar, El Obeid, Gondokoro.

REMARKS.

Egypt proper consists of the Nile basin from the Mediterranean up to the first cataract, together with the corresponding Red Sea coast and whatever of the Libyan desert lies between the Nile basin and Tripoli territory. The left bank of the Nile ascends gently to the Sahara table-land; the right bank is separated from the Red Sea by coast-ranges rising to a maximum height of 2500 feet, and extensive enough to contain a nomad population. The cultivable portions are threefold, viz., the delta, a land of railways, canals, and rice-fields; the immediate banks of the river above the delta; and the oases, a series of depressions running nearly parallel to the Nile, about eighty miles to the west of it, and owing their fertility to the percolation of Nile water to their subsoil. The Great Oasis is 100 miles in length. In the one called Siwah stood anciently the famous temple of Jupiter Ammon. Being an almost rainless country, Egypt has no natural forests; and few trees are planted. Fertility is due to the annual inundation, which lasts from solstice to solstice, and is caused by the flooding of Nile tributaries in Abyssinia during the summer rains of that country. From the first cataract downwards, the Nile flows within embankments; and by sluices in these it is distributed over the country. So favourable are soil and climate that, with irrigation, a double harvest is reaped, which leaves for exportation a large surplus of agricultural produce, chiefly grain, pulse, cotton, and sugar. The purest descendants of the ancient Egyptians are the Christians of Egypt, called Copts; the mass of the population, a mixture of the same race with Arab blood, is Mohammedan. The fellaheen, or peasantry, are a quiet, light-hearted people, ground down by taxation and usury. The ruling class is of Turkish descent, and so is the Khedive, as the sovereign is called. His capital, **Cairo**, is the largest town in Africa. It is thoroughly Oriental, with narrow streets, crowded and noisy bazaars, and mosques, minarets, tombs, and gateways for the chief sights. It is a resort of tourists, because of the great pyramids on the opposite bank, and the opportunity of going up the Nile by steamer. So important is Egypt as containing the Suez Canal route to India that, to maintain the government of the

Khedive against the insurrection of Arabi and other pashas, a British expedition bombarded the forts of Alexandria, stormed the insurgent stronghold at Tel-el-Kebir, near Ismailia, and took possession of the country, all in 1882. The British occupation continues.

Till 1884, the Khedives of Egypt controlled the Nile basin, along the Bahr-el-Abiad or White Nile, up to its lake-sources, Victoria Nyanza and Albert Nyanza; they controlled also Darfur and Waday. But Arabi's insurrection in Egypt proper was followed by an insurrection on the Soudan border under the Mahdi, who declares himself Mohammed's successor and a redresser of wrongs; and with this insurrection the British Government declined to deal. The consequence is that, for the time being, Egyptian dominion does not extend far beyond Egypt proper. Darfur and Waday will be mentioned again under Soudan: Nubia and the White Nile territory are described here.

Nubia is the country of the six cataracts, with soil like fire and wind like flame, as the Arabs say, up to the 18th parallel. That is the limit of the intertropical rains; and just there the Atbara, the last great tributary of the Nile, comes in, carrying with its waters, except during the three months prior to June, when its lowest reaches are merely a series of water-holes, a supply of black soil, which through the inundation becomes a rich top-dressing to the land of Egypt. In Nubia itself, the country on either bank of the Nile rises so as to prevent inundation. Khartoum, at the confluence of the Bahr-el-Azrek, or Blue Nile, with the Bahr-el-Abiad, or White Nile, is the most southerly town in Nubia.

Sennar and Kordofan, often mentioned as parts of Nubia, are here included in the White Nile territory. Sennar belongs rather to the Blue Nile, but both are situated above the confluence of the Blue with the White. Intertropical rains make the whole region luxuriant with vegetation. For about 200 miles, beginning below Gondokoro, the Nile bed is a huge swamp of reeds and papyrus. Above Gondokoro the highlands begin, the general surface about 4000 feet above the ocean level, fertile and well wooded, with mountains rising 4000 feet higher still. The true lake-source of the White Nile is the largest lake in Africa, Victoria Nyanza, a table-land lake of irregular outline, with mountains to the south and east, and a flat western shore. The longest feeder of this lake is the Shimeeyu, which rises in 5° 13′ S. lat.: the largest, which comes from the S.W., has been called Alexandra. The Nile leaves it by Ripon Falls. Albert Nyanza, a mountain lake filling a rocky trough, is a back-water to the White Nile, rather than a source. In the region of these great lakes, the white races of northern Africa and Mohammedanism meet the black tribes of central Africa and Paganism.

Egyptian dominion had extended along the whole western coast of the Red Sea, and along the African coast of the Gulf of Aden as far as Berbera, the seat, notwithstanding sandy horrors, of an annual fair. Even the inland kingdom of Harar, a highly fertile country on

the headwaters of the River Haines, which flows into a lake without outlet, had submitted to Egypt. The British Government will probably assist Egypt to retain her hold of the coast-lands.

	Sq. miles.	Population.
Egyptian dominion prior to 1884, .	1,000,000	17,000,000
Egypt proper, ...	212,600	5,517,000

TRIPOLI AND TUNIS.

Barbary being a name for all the coast-lands lying along the Mediterranean from Egypt to the Atlantic, Tripoli and Tunis may be called Eastern Barbary. Tunis is at present occupied by the French; but the government is still nominally that of the native Bey, under the suzerainty of the Sultan of Turkey. Tripoli is a regency of the Ottoman Empire, including inland Fezzan, and sometimes maritime Barca. Since 1879, Barca has been a separate vilayet. In Eastern Barbary, the Atlas Mountains, 3200 feet high in Trípoli, sink, by the plateau of Barca, with only 1500 feet of elevation, into the Libyan desert. Rivers flow into lakes without outlet, or lose themselves in the sand. In most places water can be had by sinking wells about ten feet deep. The coast-lands, and the oases, which are just depressions moistened by the underground flow to them of natural drainage, are highly fertile. Fezzan, with its numerous oases, may be described as an archipelago of verdant islands in an ocean of sand. Tunis is well advanced in agriculture, manufactures, commerce, and railways. It teems with such produce as wheat, maize, and olives.

Divisions.	Population.	Chief Towns.
Barca	350,000	Bengazi.
Tripoli	550,000	Tripoli.
Fezzan	100,000	Mourzouk.
Tunis	2,000,000	Tunis.

EXERCISES.

What are the limits of Egypt proper? Contrast the heights which form the eastern and western sides of the Nile basin in Egypt proper. Distinguish the three cultivable regions. Where are the Egyptian oases? Name two of them, adding particulars. What causes the annual overflow of the Nile? Account for the absence of forests from Egypt? How is the inundation controlled? What are the chief productions of the soil? Who are the Copts? Who are the *fellaheen*? What is the Khedive? Give particulars showing that the aspect of the capital is thoroughly Oriental. Find out two towns on the Nile above Boulak, the river-port of Cairo, and two towns at mouths of the Nile. What three towns are on the Suez Canal? What led to the British occupation?

What was the extent of Egyptian dominion prior to 1884? What events led to the loss of almost all that dominion? Describe Nubia. What parallel is the limit of the intertropical rains? What great acces-

sion does the Nile receive just where they fail? During what months is that accession suspended? Why does the Nile not inundate Nubia? Where do the two Niles meet? What countries, one on the Blue Nile, the other on the White, are often included in Nubia? How do the intertropical rains enrich the surface of Egypt? Describe the great Nile swamp. Describe the highlands of the White Nile. Contrast the Victoria Nyanza and Albert Nyanza lakes. What is the chief feeder of the former? By what falls does the White Nile leave it? What races and religions meet in the region of these lakes? What of Berbera and Harar?

What is Barbary? What countries form eastern Barbary? What of the Atlas Mountains in these countries? What of the rivers? What causes an oasis? What two districts commonly go with Tripoli proper? Which of these districts is a land of oases? In what respects is Tunis the most advanced of the eastern Barbary States? Name three of its chief products. What of its political relations?

BRITISH POSSESSIONS.

1. The largest by far of the British possessions in Africa is **Cape Colony**, bounded N. by Orange River, except where Griqualand West comes in, lying as that province does beyond Orange River; W. by the Atlantic; S. by the Indian Ocean; E. by Transkeian Kaffirland and Basutoland. The area of the colony, together with the two territories just mentioned on its eastern boundary, which are under British control, is over 240,000 square miles, and the population about a million and a half. The whole territory is about equal in size to the German Empire.

Towards the Indian Ocean the coast-ranges of Cape Colony are threefold, with wide intermediate terraces, and a long descent from the innermost range to Orange River. The innermost range is the highest of the three, culminating near the middle of its length in Compass Berg, 8500 feet. None of the rivers are navigable, not even Orange River, though 1200 miles long. The coast-lands in the eastern half of the colony are well watered, thanks to the S.E. trade-wind from the Indian Ocean, consequently well-wooded and fertile. All the rest of the colony suffers from the want of seasonable rains, and the western coast is arid even to barrenness. Inside the coast-ranges Great Bushmanland receives only uncertain thunder-rains, which flood the immense flat with shallow lakes, locally called Vlei. Irrigation gives fertility; but Cape rivers, even when permanent, flow in deep and almost level beds, from which it is very expensive to draw water. As yet the country is mainly pastoral, and wool is its chief export. Cape wines are acquiring a good name; ostrich-farming, with a view to the feathers, has proved a success; and the diamond mines of Griqualand West have created the town of Kimberley, second only to the capital, **Cape Town**, in population. Cape Town has the only good harbour in the colony, formed by a breakwater in Table Bay. **Railways** start into the interior from

three coast towns, Cape Town, Port Elizabeth, and East London; and the midland line, as the second of these is called, has pierced the innermost of the three coast-ranges. The native brown races outnumber the whites in the ratio of 3 to 1; and the white population of Dutch descent outnumbers the British. Most of the natives profess Christianity now; nevertheless, their great numbers is an objection to Europeans contemplating emigration.

Throughout the whole region north of Cape Colony, as far as the plateau of Lake Ngami, and the southern limit of Portuguese territory on the Atlantic, British influence is felt, *i.e.*, throughout Bechuanaland, Kalahari desert, Great Namaqualand, Damaraland, and Ovampoland. The last-mentioned is a well-watered, grazing country; the others are arid, but Great Namaqualand and Damaraland are rich in copper. Walfisch Bay in the latter, and Ichabo Island in the former, are settlements directly under the British crown, which the Cape Colony has been invited to maintain. In 1884, Angra Pequena Bay, in Great Namaqualand, became a mercantile station of the German Empire. The natives north of Cape Colony live by pasturage and the chase.

2. **Natal.**—This colony has Transkeian Kaffirland and Basutoland on its southern border, and on its northern Zululand, from which it is separated by the river Tugela and its tributary, Buffalo River. The area is larger than that of Switzerland. Of the total population, 416,000, about 17,000 are coolies employed in the coffee and sugar plantations. The natives outnumber the whites in the ratio of 13 to 1. The whole of Natal lies outside the African rim, which is here single, consisting only of the Drakenberg Mountains. The surface rises in terraces from warm coast-lands to pastoral uplands, and the scenery is in many parts highly picturesque. The chief exports are coffee and sugar, hides and ostrich feathers. Not one of the many rivers is navigable; and the only harbour on its coast is Durban, 55 miles from the capital, **Pietermaritzburg.** There is railway communication between Durban and the capital, with branches extending to right and left along the coast.

3. **West Africa Settlements.**—These are Gambia and Sierra Leone, separated from each other by a considerable extent of coast. The former, islands and mainland included, has an area of only 21 square miles; and the capital, **Bathurst,** is on the Island of St Mary. The latter is about 20 times larger; and its capital, **Freetown,** is on the mainland. Both are unhealthy; and they are held merely as trading stations, where miscellaneous tropical produce, grown by the natives, is exchanged for manufactured goods.

4. **Gold Coast and Lagos.**—The Gold Coast protectorate extends from 2° 40′ W. long. to 1° 10′ E. long. Lagos comprises the island so-called, and the opposite Slave Coast from 2° 50′ to 4° 30′ E. long. Both are governed from **Accra,** a comparatively healthy

place on the Gold Coast. They are held both as trading settlements and as vantage-ground for keeping down the slave trade, and getting service substituted for slavery among the natives. The main supply of palm oil comes from the Gold Coast; and Lagos I., as offering the only safe anchorage along 600 miles of coast, has become a great emporium.

Between the British Gold Coast and the Kong Mountains, which here form the African rim, lies the Ashantee kingdom; capital **Coomassie,** taken in 1874 by the British, who found in it traces of human sacrifice on a large scale.

5. Islands.—St Helena, in the Atlantic, rugged and mountainous, but eminently healthy, was the place of Napoleon Bonaparte's exile and death. The capital, **Jamestown,** stands on the one good inlet, St James' Bay. Outliers of St Helena are Ascension, far to the north-west, and Tristan da Cunha, farther still to the south.

In the Indian Ocean, Mauritius, highly mountainous, has rich sugar-plantations worked by coolies from India. So prosperous is the island that even remote districts are connected by railway with the capital, **Port Louis.** Outliers of Mauritius are Don Rodriguez, the Seychelles, Amirantes, and Chagos groups. In Mahé, the largest of the Seychelles, is port Victoria, a splendid natural harbour.

EXERCISES.

What are the boundaries of Cape Colony? Which province is situated beyond Orange River? Compare the area and population of Cape Colony with those of the German Empire. Describe the configuration of it from south to north. Name and find out on the map its highest mountain. What of its rivers? What prevents them from being available for cheap irrigation? Where is irrigation least needed? Name four items of Cape produce, and say which of them is the chief export. Find out Kimberley on the map, and account for its prosperity. From which three coast-towns do railways start inland? What deters European emigrants? Name the two frontier territories under British control. Name five territories north of Cape Colony in which British influence is felt. Which one of them has good grazing? Which two of them are rich in copper? How do the natives live?

What territories lie between Natal and Cape Colony? What rivers separate Natal from Zululand? What mountains form the inland frontier? What is said of the area and population of Natal? Why have coolies been imported? Name the chief exports. What is said of the rivers and harbours?

Of the two W. Africa settlements, which is the larger? Name their respective capitals. Being unhealthy, why are they yet retained? Distinguish between the Gold Coast protectorate and Lagos. What place is the seat of government for both? For what double purpose are they held? What is the chief export from the Gold Coast? What has made Lagos I. a great emporium? What of the Ashantee kingdom and its capital?

What made St Helena famous? Why was its capital built just where

it is? Name the two outliers of St Helena, and point them out on the map. What is the chief industry in Mauritius? What proof of prosperity is stated in connexion with the capital? Of the four outliers of Mauritius, which three are groups? In which island of which group is Port Victoria?

NON-BRITISH EUROPEAN POSSESSIONS.

1. **French.**—Algeria, the Barbary state between Tunis and Morocco, is by far the largest of the French possessions. The Atlas Mountains are here 7000 feet high, a pastoral region, with corn-lands on the seaward side, and the country of dates towards Sahara. Inland from the Gulf of Cabes, behind Atlas, there is a district lower than the surface of the Mediterranean, marked by a series of lakes locally called *Shotts;* and it is proposed to convert this district into an inland sea, so as both to moisten the climate and admit ships into the interior. The climate of the seaboard is deemed perfection; and the capital, **Algiers,** is a winter resort of invalids. Railways connect almost all the towns. The chief export to Great Britain is *esparto*, for the manufacture of paper.

Senegal Settlements, viz.:—St Louis, on Senegal Island, a sandbank at the mouth of Senegal River; Goree Island, S. of Cape Verde; Dakar, opposite Goree Island, coaling-station for the Bordeaux and Brazil mail-steamers.

These stations control the trade of Senegal River, which is navigable by small craft for 750 miles.

The region of the rivers Senegal and Gambia is often, for convenience' sake, called Senegambia. Here grows the *baobab* tree, with trunks 100 feet in girth, and so soft in texture, that they are hollowed out into chambers. The Guinea Coast is understood to begin with the Senegal, Upper Guinea extending from the Senegal to the Ogowé, near the equator, and Lower Guinea from the Ogowé southward to Cape Frio.

Ivory Coast, capital, **Grand Bassam.** The French protectorate is feebly maintained.

Gaboon River, immediately north of the equator. Inland from this settlement is the native country of the gorilla. French explorers of the River Ogowé, crossing the watershed, reached the Congo by one of its right bank tributaries called Alima. On Stanley Pool they have set up a station, Brazzaville, which promises to become the headquarters of a French dominion on the Middle Congo.

Réunion or Bourbon, twin-island to the Mauritius, is famed for coffee and ebony. Outliers of Réunion are Sainte Marie Island, off the east coast of Madagascar; the Nossi group, and Mayotta, one of the Comoros, situated between the north end of Madagascar and the African mainland.

2. Portuguese.—In Upper Guinea, Portugal possesses Whydah, whence much palm oil is exported. This port is in the territory of Dahomey, the most powerful native state in Upper Guinea. The king of Dahomey's body-guard consists of 2000 women, and the same bloody rites are practised heie as in Ashantee. Capital, **Abomey.**

Portugal possesses also the southern half of Lower Guinea. The coast is arid for 30 to 60 miles inland, where fertile uplands begin, rising at length to a table-land with a climate like that of southern Europe. Capital, **Loanda.** Portugal claims also the Lower Congo; but her claim is disputed.

The African coast between Zululand and Zanzibar territory is Portuguese, and so is the basin of the Zambezi from its mouths to a short distance above Tete, where navigation is stopped by fifty miles of rapids. The Limpopo and the Rovuma also reach the sea in Portuguese territory. The former is so shallow as to be navigable for only sixty miles; the latter is now understood to receive, by secondary affluents, the outflow of Lake Shirwa, long supposed to be without outlet. The Portuguese capital is **Mozambique,** on an inshore coral island at the narrowest part of Mozambique Channel; but the most valuable place is Delagoa Bay, both because, sheltered from all winds, it offers the one first-class harbour between Port Natal and Zanzibar, and because near it are heights where Europeans can safely live. Moreover, it is proposed to make Delagoa Bay the terminus of a railway from the Transvaal, the granary of S. Africa.

The following islands are Portuguese:—

Madeira, deemed an integral part of Portugal, see page 163.

Cape Verdes, in the Atlantic, mountainous, producing cotton; one of them, St Vincent, an important coaling-station.

Bissagos, off Senegambia, capital, **Bissao,** at the mouth of Rio Grande, of which it commands the trade.

Prince's Island and St Thomas, in the Bight of Biafra, mountainous and fertile.

3. Spanish.—The Presidios in Morocco are penal settlements, two of them islands, and two on the coast of the mainland. The chief one, Ceuta, is also a fortress, situated on the mainland, opposite Gibraltar.

The following islands are Spanish:—

Canaries, deemed an integral part of Spain, see page 153.

Fernando Po and Annobon, in the Bight of Biafra; both of them mountainous and fertile. Fernando Po, with its peak 10,000 feet high, is a sanatorium. The views are magnificent, including the Cameroon Mountains, 13,129 feet high, on the opposite mainland, a group of extinct volcanoes outside the coast-ranges proper. Annobon is so neglected by Spain as to be practically independent.

EXERCISES.

Name the largest French possession. Between what two Barbary states is it situated? Of what three regions, from the coast inland, does it consist? What is proposed to be done with the *Shotts*, and for what ends? What is said of the capital? What is the chief export to Great Britain? Name the three Senegal settlements. Of what use are they to France? What is meant by Senegambia? What is remarkable about the *baobab* tree? What are the limits of Upper and Lower Guinea? What is the French capital on the Ivory Coast? Where is Gaboon River? Give an account of Brazzaville. For what two articles is Réunion famed? Name the French islands off the coast of Madagascar.

Describe Portuguese Lower Guinea. Name the capital. What are the Portuguese limits on the east coast? What has stopped their progress up the Zambezi? What of the rivers Limpopo and Rovuma? Describe the situation of the capital. What makes Delagoa Bay a valuable possession? What African island is deemed part of Portugal? Describe the Cape Verdes. Of what river do the Bissagos command the trade? Name the two Portuguese islands in the Bight of Biafra. What possession has Portugal in Upper Guinea? What king has an Amazonian body-guard? Name his capital.

Of what nature are the Spanish settlements in Morocco? Name the chief one. What African group is deemed an integral part of Spain? Name the two Spanish islands in the Bight of Biafra. Which one is a sanatorium? Which one is practically independent? Compare its peak with the Cameroons on the opposite mainland.

INDEPENDENT STATES.

1. **Morocco.**—This, the largest of the Barbary states, has only a corner of coast-land on the Mediterranean, the far greater part of it lying along the Atlantic. The sultan is despotic, his interpretation of the Koran taking the place of written law. School-lore is universal to the extent common in Mohammedan countries, viz., of reading and writing, and reciting portions of the Koran. The chief exports to Britain are pulse, maize, and olive oil. **Morocco** city is the capital, and Meguinez the sultan's summer residence; but Fez, the ecclesiastical capital, and seat of a university, is larger than either.

2. **Abyssinia.**—This country has no coast-land, though one corner approaches the Red Sea in the direction of the port of Massowah. It is, as it were, a tower abutting on the inside of the mountain-wall which encloses the interior of Africa; for it consists of plateaux 5000 to 8000 feet high, on which stand ranges and groups of mountains attaining a maximum height of 15,200 feet above the ocean-level. In Lake Dembea, Abyssinia contains the source of the Blue Nile, the flooding of which, and of the Atbara, tributary to the united stream, by the summer rains, causes the annual inundation of Egypt. The peculiar distinction of Abyssinia among the white race countries of Africa is that it alone has preserved the

Christianity once common to them all. The Abyssinians, like the Copts of Egypt, acknowledge the Patriarch of Alexandria as their head. Since the death of King Theodore, who was killed at the taking of Magdala fortress by the British in 1868, the political condition of the country has been unsettled. Three provinces are usually mentioned, viz., Tigré, Amhara, Shoa; and **Gondar,** in Amhara, the central province, is reckoned the capital.

3. **Zanzibar.**—This Mohammedan state comprehends the coast-land, on the eastern side of Africa, from near the equator southward to Portuguese territory, together with the adjacent islands, after the largest one of which it is named. Zanzibar Island, 55 miles long, with a greatest breadth of 25 miles, is green the year through with orange-groves and luxuriant crops of sugar-cane, rice, and the like. **Shanganny,** the chief town in it, and residence of the Sultan, is a great emporium of trade. Ivory, gum, copal, and cloves are the chief exports.

4. **Madagascar.**—This largest island of Africa, containing nearly twice the area of the British Isles, forms a not very well compacted monarchy, all the tribes not having submitted to the Hovas of the elevated interior, whose capital, **Antananarivo,** is the chief town. A belt of forest, about 15 miles broad, nowhere far from the shore, encircles the interior; and within this forest-ring most of the population is found. The chief trade is with the islands Mauritius and Bourbon. Missionaries have introduced the Roman character, in which several native newspapers are printed. Christianity has made such progress that Sunday has become a legal day of rest.

5. **Orange Free State.**—This republic of Dutch *boers,* situated within the African rim, comprises the country which the upper Orange River and its tributary the Vaal nearly encompass, excepting what of it is included in Basutoland and Griqualand West. The slope of the surface is towards the Vaal. The winters are cold, because of the elevation, which averages 5000 feet; the summers are hot, with prolonged droughts and terrific thunder-storms. Both wheat and maize are grown, and the pasturage is good. Capital, **Bloemfontein.**

6. **Transvaal or South African Republic.**—This country, named from its position beyond the Vaal, and bounded on the north by the River Limpopo, is a republic of Dutch *boers,* which for a time acknowledged the suzerainty of Queen Victoria. Its western boundary has been settled by negotiation between Transvaal delegates and the British Government: its eastern boundary is the great African rim, within which it wholly lies. The country slopes to the Limpopo, and, being well watered, yields splendid pasture in the uplands, coffee, sugar, and cotton in the lowlands, with finest wheat in between. There are gold diggings around Leydenburg. Potscherfstrom is a larger town than the capital, **Pretoria.** Here, as everywhere in S. Africa, the native brown races immensely outnumber the whites.

7. **Liberia.**—This republic, occupying part of Grain Coast, had for its nucleus about 10,000 freed negroes from the United States of North America. Its territory is now larger than Switzerland, and the population about 1,500,000. The expectation of its American founders, that civilization and Christianity would spread from it into the interior, has been disappointed. Capital, **Monrovia.**

INDEPENDENT TERRITORIES.

1. **Sahara.**—Sahara is a low table-land, the average elevation above the ocean-level being only 1300–1650 feet; and it is desert, because there is almost no rainfall, and wells are in places ten days' journey apart. The generally level surface, of which only one-fifth is sand, breaks into ridges, higher table-lands, and mountain-knots, with a maximum height of 8200 feet; and the highest summits are covered with snow during several months of the year. Travellers complain more of the night-cold than of the day-heat. Every permanent well creates a little *oasis*, and the mountainous districts contain settled communities. The best-known one is the kingdom of Air or Asben, near the centre of Sahara, with mountains 6000 feet high. Capital, **Agades.** Most of the population of Sahara is nomadic.

2. **Soudan.**—From its great fertility under intertropical rains, this region has been called an inland India. The natives are negroes; but the Arabs, even where they have not given a sovereign to the state, have imparted their civilisation and Mohammedanism. Lake Tchad and the Niger are the two great natural features of the Soudan. The former is a shallow inland sea, with overflow into a depression called Bodele, but without outlet to the ocean, and elevated only 800 feet above it. The latter is a river 2000 miles in length, navigable by small craft from above Timbuctoo down to the Gulf of Guinea, which it reaches by twenty-two mouths, forming a delta larger than that of the Nile, a very unhealthy region. The names of the principal Soudan states are subjoined:—

On the watershed between the White Nile and Lake Tchad: Darfur, capital, **Fasher.**

Lake Tchad region: Waday, Kanem, Bornu, Baghirmi.

Niger Basin: Bambarra, Tombo, Masina, Houssa, Adamawa, Yoruba, Benin.

When Abyssinia is taken as the eastern boundary of the Soudan, Sennar and Kordofan are included, along with Darfur and Waday, under the name Egyptian Soudan. But between Kordofan and Darfur there lies a belt of uninhabitable steppe; and the watershed between the Nile valley and Soudan proper rises, in the mountainous cone of Darfur, to the height of 5–6000 feet. The north-eastern slope of Darfur is an infertile country of reddish-yellow sand; the westward slope, which continues through Waday in the

direction of Lake Tchad, is well watered and highly productive. Waday never was Egyptian, except in that it acknowledged the suzerainty of the Khedive in 1875, the year after Darfur had been overrun by Egyptian troops.

Timbuctoo, in Masina, a trading centre situated at the top of the northern bend of the Niger, is the Soudan town best known by name; but the largest town is the capital of Bornu, the most powerful of the Soudan states, viz., **Kuka**, with a pop. of 60,000.

3. **Congo Basin.**—The Congo, the only great African river without a delta, issues from Lake Bangweolo, of which the chief feeder is the Chambeze, an eastern influent. It passes through Lake Moero and other lakes, receiving tributaries which also flow out of or through lakes, as the Lukuga from Lake Tanganyika. Its course is interrupted near the equator by six falls; then come 835 miles of navigable water, 2–10 miles broad, ending in Stanley Pool, on the north shore of which stands Brazzaville, already mentioned, while lower down, on the south shore, Mr Stanley has founded Leopoldville, in name of the "Association Internationale," of which the King of the Belgians is patron. Below Stanley Pool navigation is interrupted for 180 miles by cataracts, ending in Yellala Falls, 142 miles from the Atlantic. The Congo coast-land is a forest swamp; the 180 miles of cataracts is a poor country; above Stanley Pool the Congo basin is both fertile and healthy.

4. **Zululand.**—Zululand, extending from Natal northwards to Portuguese territory, and lying, like Natal, outside the African rim, is flat on the whole, and marshy, but well timbered. By restoring King Cetewayo in 1883, to rule over two-thirds of his former domain, the British thought to quiet tribe jealousies. The expectation was not fulfilled; and, now that Cetewayo is dead, disorder continues.

5. **Upper Zambezi.**—The Zambezi rises in the Mossamba range, which shuts off Lower Guinea from the interior. First of all, it traverses a rich and salubrious upland, about 5000 feet above the ocean-level; then it and its tributaries drain a marshy table-land, with Lake Dilolo in the north, and Lake Ngami in the south. About the middle of its course it receives its largest tributary on the right bank, the Chobé; and soon thereafter, itself now a mile broad, it rushes over a precipice of 100 feet, forming the Victoria Falls. Its best known tributary on the left bank is the outflow of Lake Nyassa, the Shiré, which joins it in Portuguese territory. The Murchison Cataracts interrupt navigation on the Shiré. Immediately above Portuguese territory the natives are fierce and cruel. In the Victoria Falls region they are a superior race, but the country is not well reported of, except on the headwaters of the Zambezi: fevers prevail by the river, a poisonous plant infests the pastures, and the tsetse-fly is death to most domestic animals.

6. **Somali.**—North of Zanzibar territory, and round Cape Guardafui, to where Egyptian territory used to begin, the African coast is occupied by independent tribes,—Somali on the coast, Gallas inland,

Mohammedan all except such of the Gallas as, from near neighbourhood, have received some tincture of Christianity from the Abyssinians. This region is rich in odoriferous gums, which are marketed at the annual fair of Berbera. Socotra Island, off Cape Guardafui, is famous for aloes, and important as being on the route to India. The Arab element prevails in the population. Its ruler is under treaty to allow no settlement on it without British consent.

EXERCISES.

Compare the size and situation of Morocco with those of the other Barbary states. How does Mohammedanism affect government and school? What are the chief exports to Britain? For what are the three principal towns severally remarkable?—Where does Abyssinian territory approach the Red Sea coast? Describe its surface. What of Lake Dembea? What has Abyssinia to do with the annual inundation of the Nile? What of religion and government in Abyssinia? Name the three provinces and the capital.—What are the limits of Zanzibar dominion? Describe Zanzibar Island. Name its capital. Name the chief exports.—Where in Madagascar is most of the population found? Which is the ruling race, and where is their capital? With what islands is trade chiefly carried on? What progress has Christianity made?—Define the limits of Orange Free State. Describe the climate. Mention the produce.—What are the boundaries of the Transvaal? In what direction does it slope? Where is the produce tropical? Where are the gold mines? Name the largest town and the capital. What of the population?—Where is Liberia? Tell its story. Name its capital.

Describe the surface of Sahara. Why is it desert? Give an account of one settled community in it.—What makes the Soudan fertile? How have the Arabs proved their superiority over the negroes here? What of Lake Tchad? Give an account of the Niger. How far up is it navigable? Name the principal states round Lake Tchad? Name the principal states along the Niger, from Bambarra to Benin. What four countries may be included under the name Egyptian Soudan? Describe the watershed between the Nile valley and Soudan proper. In what sense only was Waday ever Egyptian? Where is Timbuctoo? Which is the most powerful state, and which the largest town?—In what respect does the Congo differ from the other great African rivers? Name the uppermost two lakes in its course. Name the affluent from Lake Tanganyika. Where is the navigation of the Congo obstructed? Where is Stanley Pool? Give some account of Brazzaville and Leopoldville. From what falls is navigation to the Atlantic open? What part of the Congo basin is best reported of?—What are the boundaries of Zululand? Give some account of it physically and politically.—Where does the Zambezi rise? Name the two lakes of the marshy table-land, and point them out on the map. Describe Victoria Falls. What tributary comes in a short way above them, and on which bank? Where are the Murchison Cataracts? What lake is reached by ascending the Shiré River? What of the inhabitants of the Upper Zambezi? What evil report is given of most of the country?—Where are the Somali and Gallas tribes? What is the special produce of their country? Where is it marketed? Where do some of the Gallas get a tincture of Christianity? For what is Socotra I. famous? What agreement has the British Government made with its ruler, and why?

DESCRIPTIVE TABLE.

Abeoku'ta, a combination of townships in the state of Egbaland, W. Africa, about 70 miles N. of Lagos. P. estimated at from 150,000 to 200,000.

Abo'mey, a town of W. Africa, capital of Dahomey, situated about 80 miles from the Slave Coast. Pop. 50,000.

Aboukir, Bay of, *â-boo-keer'*, on the coast of Egypt, celebrated for the victory which Lord Nelson here obtained over the French fleet in 1798.

Abyssin'ia, an extensive country of E. Africa, part of ancient Ethiopia, lying between 8° and 16° 30′ N. lat., and between 34° 40′ and 40° E. long. Its area is estimated at 200,000 square miles, and the pop. at 4,000,000. *See* REMARKS, page 322.

Ac'cra, a town and British settlement on the Gold Coast, W. Africa. Pop. 3000.

Adama'wa, a country of Central Africa, N. of the equator, lies between 7 and 11 N. lat., and 11 and 16 E. long.

A'dowa, a town of Abyssinia, capital of the state of Tigré. Pop. 8000.

Ag'ades (an enclosure), a town of Central Africa, capital of Air or Asben, an oasis in the Sahara; it is one of the great marts of the caravan trade. Pop. 7000.

Agulhas Bank, *â-gool'yâs*, a large bank, round the S. extremity of Africa extending from near Natal to Saldanha Bay, with a varying width averaging 40 miles.

Albert Nyanza (Nyanza means lake, and according to Arab pronunciation the *n* and *y* are joined in the mouth, and not pronounced separately; but the native tribes pronounce it either *nee-yân'ja* or *nee-yân'za*), a large inland sea or lake of fresh water in Central Africa, at the equator; it forms one of the principal reservoirs of the Nile, and was discovered in 1864 by Sir Samuel and Lady Baker, who named it in honour of Prince Albert, consort of Queen Victoria.

Alexan'dra Nile, or Kage'ra, a river of Equatorial Africa, flowing into the Victoria Nyanza on the W. Mr H. M. Stanley, the celebrated explorer, named it after the Princess of Wales. In its course from the S.W. it passes through a large lake, also named *Alexandra* by Mr Stanley.

Alexan'dria, an ancient and celebrated city and seaport of Lower Egypt, situated on a narrow peninsula between Lake Mareotis and the Mediterranean. It takes its name from Alexander the Great, by whom it was founded about the year 332 B.C. Here Euclid, the mathematician, taught about 320 B.C. The fortifications of Alexandria were bombarded and demolished by a British fleet in 1882, when a large portion of the city was laid in ruins by Arab incendiaries. Pop. 212,000.

Alge'ria, ancient *Numidia*, a territory of N. Africa, bounded on the N. by the Mediterranean, W. by Morocco, S. by the Great Desert of Sahara, and E. by Tunis. Pop. 2,867,000, about 250,000 of whom are Europeans. *See* REMARKS, page 320.

Algiers, *ăl-jeerz'*, a seaport and strongly fortified city of N. Africa, capital of Algeria, on the W. side of a bay of the same name in the Mediterranean. Pop. 52,702.

Algo'a Bay, a bay about 425 miles E. of the Cape of Good Hope; its shores are among the most fertile and beautiful districts of South Africa.

Amha'ra (the high lands), a state of Abyssinia, to the W. of the Tacazze. It includes Gondar and Lake Dembea, and is crossed by ranges of lofty mountains.

Ango'la, a state of Lower Guinea, W. Africa, having Congo on the N., and Benguela on the S. It is partly subject to Portugal, and has a large traffic in ivory. Pop. 250,000.—Chief town, **St Paul de Loanda.**

Angornou', a town of Bornou, Central Africa, N. of the equator; it is a large trading centre. Pop. 30,000.

Anko'bar, the capital of the province of Shoa, Abyssinia. Pop. 12,000.

Anno Bom, or An'nobon, a small island in the Gulf of Guinea, W. coast of Africa, belonging to Spain. Pop. 3000.

Ar'drah, a town of Dahomey, W. Africa, about 25 miles inland. Pop. 20,000.

Ascen'sion (discovered by the Spanish on Ascension Day, 1501), a small, barren-looking island in the South Atlantic, 820 miles N.W. of St Helena. It belongs to Great Britain. —70, 55 S. 14, 25 W.

Ashantee', a kingdom of W. Africa, extending about 300 miles inland from

the Gold Coast; it is inhabited by a warlike people. It is covered with forests, and abounds in gold. Pop. estimated at 4,500,000.

Assouan, Assuan, Asswan, or **Es-Souan,** *äs-swän'* (the opening), a frontier town of Egypt towards Nubia, situated on the Nile, and surrounded by mountains of granite. Its ancient name was *Syene,* and near it are the quarries of granite called syenite, which the Egyptians used in making Cleopatra's needle and other obelisks. Opposite is the island of Elephantine, famous for its rock-hewn temples. About three miles above it the cataracts of the Nile begin.

At'las, a chain of lofty mountains in N. Africa, traversing the greater part of the Barbary States from N.E. to S.W. *Mount Hentet* is 15,000 feet above the sea.

Axoom', Axoum', or **Axum',** a town of Abyssinia. Pop. 4000.

Babelman'deb, Strait of (the gate of tears), a channel about 20 miles broad, uniting the Red Sea with the Indian Ocean.

Badag'ry, a town of W. Africa, on the Gulf of Benin. Pop. about 10,000.

Bahr el A'biad (white river); **Bahr el Az'rek** (blue river). *See* **Nile.**

Bambar'ra, a kingdom of N.W. Africa, on the banks of the Niger. It is fertile and well cultivated, and contains several large towns.

Bambouk', a mountainous country of N.W. Africa, between the Senegal and the Falemé.

Bangweo'lo, a lake of Central S. Africa, discovered by Dr Livingstone in 1868, and near the S. shore of which he died 1st May 1873. It forms one of a chain of great lakes in the valley of the *Congo,* and its chief affluent is the river *Chambeze.*—11, 30 S., from 27, 30 to 30 E.

Bar'ca, a maritime territory of N. Africa, E. of Tripoli. The ancients had flourishing settlements here; and considerable remains of Cyrene, Ptolemais, etc., have been discovered. Pop. 302,000.

Bas'sa, a seaport of Upper Guinea, W. Africa.

Bathurst, a seaport of W. Africa, on the island of St Mary, at the mouth of the Gambia. Pop. 2825.

Benga'zi, a seaport of Barca, N. Africa, on the Gulf of Sidra. Pop. 6000.

Benguela, *ben-gā'lā,* an extensive territory of Lower Guinea, W. Africa, lying to the southward of Angola; it is claimed by Portugal. Pop. 1,880,000.—The capital is named **New** or **St Philip de Benguela,** and has a pop. of about 3000.

Benin, *ben-een',* a kingdom of Upper Guinea, W. Africa, extending along the coast of the Bight of Benin.—The capital, **Benin,** is situated inland, on an open plain. Here Belzoni, the celebrated traveller, died in 1823. Pop. 15,000.

Benowm', a town of Central Africa, capital of Ludamar.

Benué. *See* **Chadda.**

Ber'ber, a town of Nubia on the Nile, near the confluence of the Atbara. Pop. 8000.

Ber'bera, a seaport on the coast of the Somali country, E. Africa, between Cape Guardafui and the entrance of the Red Sea.

Biaf'ra, a country of Upper Guinea, W. Africa, bordering on the Cameroons River.

Binué. *See* **Chadda.**

Bissa'gos, or **Bijuja Islands,** a group of islands off the W. coast of Africa, between the mouth of the Gambia and Sierra Leone, belonging to Portugal.

Bissa'o, a seaport and island, chief of the Bissagos group, off the W. coast of Africa.

Bizer'ta, a seaport of Tunis, N. Africa, at the head of a deep bay. Pop. 8000.

Blan'co, Cape (white cape), a headland forming the most westerly point of the Sahara or Great Desert, Africa. —20, 46 N. 16, 58 W.

Bloemfontein, *bloom'fon-teen,* the principal town in Orange Free State, S. Africa. Pop. 2567.

Bojador, Cape, *bo-yā-dor'* (round cape), a promontory of W. Africa, S. of Morocco, stretching into the Atlantic. 26, 7 N. 14, 29 W.

Bon, Cape, N.E. of Tunis, N. Africa, opposite Sicily.—37, 4 N. 10, 53 E.

Bo'na, a seaport of Algeria, N. Africa. Pop. 16,196.

Bondou', a country of W. Africa, between the Senegal and the Gambia. Its pop. is said to be 1,500,000.

Bon'ny, a town of Upper Guinea, W. Africa, at the mouth of one of the branches of the Niger.

Bornou', one of the most powerful kingdoms of Central Africa, N. of the equator, is situated in Soudan, S.W. of Lake Tchad. — The chief town is **Bornou** or **New Birnie.** Pop. 10,000.

Bourbon. *See* **Reunion.**

Bous'sa, or **Boo'sa,** a town of W. Soudan, Central Africa, the capital of a country of the same name on the Niger. Mungo Park was killed here by the natives in 1805. Pop. 18,000.

Brass, a river of Africa, called by the Portuguese **Nun,** one of the principal branches of the Niger; it separates into two channels before reaching the sea.

Cabes, *kä'bes,* a seaport of N. Africa, 200 miles S. of Tunis, on the Gulf of Cabes. Pop. 6000.

Cabes, Gulf of, an inlet of the Mediterranean, indenting the coast of Tunis, N.E. Africa.

Cairo, *ki'ro,* called **El Masr** by the Egyptians, and **El Kahireh** (the victorious) by the Arabs, the modern capital of Egypt, and the largest city in Africa, is situated near the eastern bank of the Nile. It was founded by the Arabs about A.D. 970. On the 14th Sept. 1882, immediately after the battle of Tel-el-Kebir, Cairo was taken possession of by British cavalry, when Arabi Pasha and 10,000 Egyptian soldiers surrendered. Pop. 327,462.

Calabar', a maritime district of Upper Guinea, W. Africa, on the Old Calabar Firth, opposite the island of Fernando Po.

Calabar, New, a branch of the River Quorra at its delta, flows S.E., and enters the Bight of Biafra, W. of Bonny.

Calabar, Old, or **Cross River,** a river of Upper Guinea, W. Africa, which falls into the Bight of Biafra. On its banks, a few miles from its mouth, are *Duke Town* and *Creek Town,* where the United Presbyterian Church of Scotland has highly interesting missions.

Camaroon, or **Camaroens,** *kä-mä-roons',* a river of Upper Guinea, W. Africa, which falls into the Bight of Biafra, opposite Fernando Po.—The **Camaroon Mountains,** close to the shore, rise to the height of 13,129 feet.

Cana'ry Islands, or **Cana'ries,** ancient *Fortunatæ Insulæ,* a beautiful group in the Atlantic, off the N.W. coast of Africa. They belong to Spain. They are seven in number, *Teneriffe, Grand Canary,* and *Palma,* being the principal. The *Peak of Teneriffe* rises 12,198 feet above the sea, and is seen by mariners at the distance of 140 miles. Pop. 280,388.

Cantin, Cape, *kän-teen',* a promontory on the coast of Morocco, N.W. Africa.—32, 32 N. 9, 21 W.

Cape Coast Castle, a town of the Gold Coast Colony, W. Africa, between the Assine on the W. and the Volta on the E. Pop. 10,000.

Cape Colony (takes its name from the Cape of Good Hope), an extensive and important colony belonging to Great Britain, occupying the S. extremity of South Africa. *See* REMARKS, page 317.

Cape of Good Hope, or **Cape Peak,** a promontory forming the S. extremity of Table Mountain, S. Africa; it rises nearly 1000 feet above the sea.

Cape Town, the capital of Cape Colony, S. Africa. It is situated on Table Bay, and is strongly fortified. It was founded by the Dutch in 1652. Pop. 33,250.

Ceuta, *su'tă,* or *ku'tă,* a strong seaport of Morocco, on the Strait of Gibraltar; it has belonged to Spain since 1640. Pop. 9703.

Chad. *See* **Tchad.**

Chad'da, or **Binué,** *be-noo'eh,* a large river of Upper Guinea, W Africa, which falls into the Niger or Quorra.

Coan'za, a river of Lower Guinea, W. Africa, which has its source in the Mossamba Mountains, and, after a rapid course of 450 miles, enters the Atlantic S. of Loando.

Com'oro Islands, a group of volcanic isles, lying between Madagascar and the continent of Africa. One of the group, called *Mayotta,* was ceded to France in 1841. Pop. estimated at 70,000.

Congo, *kong'go,* a country of Lower Guinea, W. Africa, separated from Loango on the N. by the River Congo, and bounded on the S. by Angola.

Congo, a great river of W. Africa, which rises in the equatorial lake region, and enters the Atlantic by an estuary, 6 miles wide, in Lower Guinea. To facilitate the opening up of the countries drained by the Congo to the influences of civilisation, an International Association was formed at Brussels in 1878, and on its behalf Mr H. M. Stanley has founded several stations on both banks of the river, and constructed important roads. *See* REMARKS, page 325.

Constantine, *kon-stan-teen',* a city of Algeria, capital of the department of the same name, situated on a steep rock, and strongly fortified. It has many fine remains of Roman architec-

ture. In its neighbourhood are the ruins of Hippo, of which St Augustine was bishop from A.D. 395 till his death in A.D. 430. Pop. 40,000.—The department occupies the whole of the eastern third of the country bordering on Tunis and the Tripoli States, and has a pop. of 1,141,838.

Coomas'sie, the capital of the kingdom of Ashantee, Upper Guinea, W. Africa; it was taken and burned by the British in 1874. Pop. estimated at 60,000.

Daho'mey, a kingdom of W. Africa, N. of the Slave Coast. The government is a sanguinary despotism, and the people are fierce and barbarous. Pop. estimated at 180,000.

Dama'raland, a country of S.W. Africa, on the coast, northward of Great Namaqualand. The Walfisch Bay district was annexed by Britain in 1878.

Damiet'ta, a seaport of Egypt, near the mouth of the eastern branch of the Nile. Pop. 32,730.

Dar-es-Salaam', a seaport of Africa, 25 miles S. of Zanzibar.

Darfur', a country of N. Central Africa, W. of Kordofan. Pop. estimated at 200,000.

Debo, *deb'o*, a lake of N. Central Africa, S.W. of Timbuctoo, on the Joliba.—On its S.W. shore is a town of the same name.

Delago'a Bay, an inlet of the Indian Ocean, on the E. coast of Africa, about 250 miles N. of Natal.

Delga'do, Cape, a promontory on the coast of Mozambique, E. Africa.—10, 41 S. 40, 40 E.

Delta, or Lower Egypt, a tract of land between the E. and W. mouths of the Nile, so named from its resembling in form *delta* (Δ), the fourth letter of the Greek alphabet.

Dem'bea, Lake of, or **Tza'na**, in Abyssinia, drained by the Bahr el Azrek or Blue River. It is about 60 miles long, and 40 miles broad.

Der'na, Der'ne, or Der'neh, a seaport of N. Africa, capital of Barca. Pop. 6000.

Derr, a mud-built town of N.E. Africa, capital of Lower Nubia, on the E. bank of the Nile. Pop. 3000.

Dilo'lo, a small lake in S. Central Africa, supposed to be the source of the great river Zambezi.—11, 30 S. 23, 30 E.

Dongola, *dong'go-lâ*, a province of Northern Nubia, consisting of the Nile valley, between 18 and 19, 30 N. Pop. estimated at 250,000.

Dongola, New, or **Mara'ka**, the capital of the above province, on the W. bank of the Nile. Pop. estimated at 20,000.

Dra'kenberg, or **Quathlamba Mountains**, *kwât-lâm'bâ*, a range in S. Africa, forming the W. boundary of Natal.

Dur'ban, the oldest town and seaport in the colony of Natal, S. Africa. Pop. 13,218.

E'boe, or **A'boh**, a town of Guinea, W. Africa, on the right bank of the Niger, about 80 miles from the ocean. Pop. 6000.

Eg'ga, a large trading town of Upper Guinea, W. Africa, on the Niger; it is the most southerly town in the kingdom of Nyffe, and has a large population.

Egypt. *See* REMARKS, page 314.

El-Obeid, *el-o-bā'id*, the capital town of Kordofan, valley of the Nile, Africa. Pop. estimated at 13,000.

Elmina, *el-me'nâ* (the mine), a seaport of Upper Guinea, W. Africa, on the Gold Coast; it belongs to Britain. Pop. 20,000.

False Bay, a large inlet on the S. coast of Africa, immediately to the E. of the Cape of Good Hope.

Fayoom', **Faioom'**, or **Fayum'**, a province of Middle Egypt, on the W. side of the Nile. Pop. 154,000.

Fernan'do Po, a mountainous island off the coast of Guinea, W. Africa. Pop. 14,000.—*See* REMARKS, page 321.

Ferro, *fer'ro*, Spanish **Hierro**, the most westerly of the Canary Islands; it was formerly used by geographers as the first meridian. Pop. 4337.—27, 45 N. 18, 7 W.

Fez (fertile or bountiful), a city of N. Africa, once famous as a seat of learning and the capital of a Moorish kingdom, to which it gave name—now united to Morocco, of which it is one of the capitals. Pop. estimated at 100,000.

Fez'zan, a country to the S. of Tripoli, N. Africa; it contains many oases, and has been described as a chain of verdant islands in an ocean of sand. It is subject to the ruler of Tripoli, and is the great emporium of the caravan trade between that country and the interior of Africa. Pop. 26,000.

Free'town, the capital of the British colony of Sierra Leone, W. Africa, situated on a bay at the mouth of the Roukelle.

Funchal, *foon-shäl'* (abounding in fennel), the capital town of the island of Madeira, on its S.E. coast. Pop. 20,606.

Gaboon', a region of W. Africa, on the E. coast of the Gulf of Guinea; it is watered by the Gaboon River.

Gam'bia, a large river of Senegambia, W. Africa; it rises among the mountains of Kong, and, after a course of about 1000 miles, falls into the Atlantic, S. of Cape Verd.—**Bathurst**, the capital of the British settlements here, is situated on an island at its mouth.

Gan'do, one of the Houssa states. in Soudan, Central Africa, on the Niger. Area estimated at 82,486 square miles; pop. 6,000,000.

Gibraltar, Strait of, between Europe and Africa, uniting the Atlantic and the Mediterranean. The breadth of the channel, where it is narrowest, is 12 miles.

Gold Coast, a country of Upper Guinea, W. Africa, having the Ivory Coast on the W., and the Slave Coast on the E. The British have several settlements here, the chief of which are *Cape Coast Castle*, *Elmina*, and *Accra*. These, with the settlements at Lagos on the Slave Coast, viz., *Badagry*, *Lagos*, *Palma*, *Leckie*, etc., were erected into the **Gold Coast Colony**, 24th July 1874. Pop. of colony, 475,000. *See* REMARKS, page 318.

Gon'dar, the capital of Abyssinia, 21 miles N.E. of Lake Dembea. It is built on the side of an extinct volcano. Pop. estimated at 50,000.

Gondoko'ro, a trading station of Africa, in the valley of the Nile, about 5 N. lat. When Sir Samuel Baker, in 1871, took possession of the countries of the Upper Nile for the Khedive of Egypt, he changed the name of this place to **Ismailia**.

Goree, *go-rā'*, a small rocky island belonging to the French, on the W. coast of Africa, S. of Cape Verd. The town of the same name is strongly fortified, and is an entrepôt for ivory, gold-dust, gum-senegal, etc. Pop. 2452.—14, 39 N. 17, 24 W.

Grahamstown, a town of Cape Colony, the capital of the district of Albany, South-Eastern Province. Pop. 6903.

Grain Coast, Upper Guinea, W. Africa; it extends from Sierra Leone to Cape Palmas. The Republic of Liberia occupies the coast, with a considerable extent of territory inland.

Gri'qualand East (the land of the Griquas), a native territory of S. Africa, part of the country formerly known as *Nomansland*. It lies to the N. of Pondoland, and has an area of 8000 square miles, with a pop. of about 78,000.

Gri'qualand West, a territory in the N. of Cape Colony, on the Vaal, W. of Orange Free State. It is well known for its diamond fields. Area about 17,800 square miles; pop. estimated at 39,000, of whom 17,000 are Europeans.

Guardaful, Cape, *gwar-dā-fwee'*, a bold headland forming the most easterly point of Africa.—11, 50 N. 51, 20 E.

Guinea, *ghin'ne*, a geographical division of W. Africa, extending from Cape Verga, 10, 20 N., to Cape Negro, 15, 41 S. It is divided into Upper Guinea and Lower Guinea. The name designates no political division, but was at one time much employed in commerce.

Guinea, Gulf of, a gulf formed by the Atlantic Ocean on the coasts of Upper Guinea, between 6, 20 and 1 S., and 7, 30 W. and 10 E.

Hous'sa, an extensive district of Soudan, Central Africa, consisting of various petty kingdoms or states, each of which has a governor, while the whole is under the supreme rule of a sultan.

In'yack, In'yak, or St Mary, an island of Africa, in Delagoa Bay.

Jaco'ba, a flourishing city of Central Africa, on the Chadda.

Jen'ne, or Jen'neh, the capital of a state of the same name in Soudan, Central Africa, on an island formed by the Joliba or Niger. Pop. 9000.

Johan'na, the central and most frequented of the Comoro Islands, in Mozambique Channel, Africa. Pop. estimated at 20,000.

Ju'by, Cape, a low sandy point on the coast of N.W. Africa.—27, 58 N. 12, 52 W.

Kaarta, *kār'tā*, a kingdom in the N.E. of Senegambia, W. Africa.

Kaben'da, a seaport town of W. Africa, 40 miles N. of the mouth of the Congo or Livingstone.

Kaf'fa, a country of E. Africa, S. of Abyssinia, between the Godjeb River on the N. and the Bako on the S.—7, 36 N. 36, 40 E.

Kaffra'ria, Caffra'ria, or Ka'firland, now called the **Transkei'an Territories**, a fertile region of S. Africa, extending from the Kei River to Natal. It is divided into districts,

most of which are semi-independent. Total pop. estimated at 400,000.

Kagera. *See* **Alexandra Nile.**

Kairwan, *kïr-wän′*, a city of Tunis, N. Africa; it is one of the holy cities of the Mohammedans, and its mosque is held sacred, as containing the tomb of Mohammed's barber.

Kalaha′ri Desert, a parched and almost uninhabited waste in S. Africa, lying between the Orange River and the parallel of 24 S., and between 19 and 22 E.

Kano′, a town of Nigritia, N. Central Africa, capital of Houssa, and one of the chief seats of the caravan-trade. Pop. 40,000.

Ken′eh, a city of Upper Egypt, on the right bank of the Nile, 31 miles N.N.E. of the ruins of Thebes. Pop. 13,200.

Kenia, *ken-e′ä*, a lofty mountain on the E. coast of Africa, near the equator. Height above the sea 20,000 feet.—36, 0 E.

Khartoum′ (the promontory or point), the modern capital of Nubia, at the junction of the Blue and the White Nile, 95 miles S.W. of Shendy. Pop. 15,000.

Kilima-Nja′ro, a lofty mountain of E. Africa, near the equator. Height 22,000 feet.

Kilwah. *See* **Quiloa.**

Kim′berley, the chief place in Griqualand West, or the Diamond Fields, S. Africa. Pop. 13,190.

Kob′be, the capital of Darfur, N. Central Africa.

Kon′de, a country at the N.W. corner of Lake Nyassa, interior of E. Africa. Near the lake extends a broad plain of wonderful fertility, with a large population.

Kong, a kingdom of W. Africa, between Bambarra and Ashantee, traversed by lofty mountains of the same name. *Kong* in the Mandingo language means "mountains."

Kordofan′ (the white land), a country of Central Africa, between Darfur and Sennaar. Pop. estimated at 1,000,000.

Kou′ka, or **Koo′ka,** a city of Central Africa, the capital of Bornou, W. of Lake Tchad.

Ku′ruman, or **New Lattakoo,** a town of South Africa, capital of the Bechuana country.

Kwan′do, an important river of S. Africa, rises in the Mossamba Mountains, E. of Benguela territory, flows S. and E. for several hundred miles as a navigable river, and enters the Zambezi, its lower course being the stream long known as the Chobe.

La′gos, part of the British Gold Coast Colony, W. Africa. Pop. 75,270.

Lattakoo′, a town of S. Africa, in the country of the Bechuanas. Pop. 6000.—27 10 S. 24, 30 E.

Le′opold, Lake, in Central Africa, lying E. of the S. part of Tanganyika. It is variously called by the natives Rukwa, Likwa, and Hickwa, but named by Mr Joseph Thomson, its European discoverer, in honour of H.R.H. Prince Leopold, Duke of Albany.

Leopoldville (named in honour of the King of the Belgians), a station at Stanley Pool, River Congo, W. Africa. *See* REMARKS, page 325.

Libe′ria (the country of the free), an independent negro republic, on the coast of Upper Guinea, W. Africa, founded, in 1848, for free negroes from the United States of America. It has about 600 miles of coast line, and extends, on an average, 100 miles into the interior. Area about 14,300 square miles; pop. 1,500,000. *See* REMARKS, page 321.

Lib′yan Desert, part of the Sahara, in Africa. It contains the oasis of *Seewah*, with the town of the same name, and is probably not less than 1000 miles in length, and from 500 to 600 miles in breadth.

Limpo′po, or **Crocodile′,** a river on the E. coast of S. Africa, rises in the territory of the Transvaal or South African Republic, and falls into the Indian Ocean.

Linyan′ti, a town of Central S. Africa, the capital of a powerful tribe, called the Makololo, in 18, 17 S. and 23, 50 E. Pop. 7000.

Livingsto′nia. *See* **Nyassa.**

Loan′da, or **St Paul de Loan′da,** a fortified seaport of Lower Guinea, the capital of Angola and of the Portuguese settlements in Western Africa. Pop. 20,000.

Loango, *lo-ang′go*, a large town of Lower Guinea, W. Africa, the capital of a kingdom to which it gives name. Pop. 20,000.

Loggun, *log-goon′*, a populous district of Bornou, Africa, S. of Lake Tchad.

Lo′pez, a peninsula on the coast of Lower Guinea, W. Africa.—0, 36 S. 8, 35 E.

Lualaba. *See* **Congo.**

Ludamar′, a country of Central Africa, N. of Bambarra, and on the borders of the Sahara.

Lupa'ta, a chain of mountains in E. Africa, W. of Mozambique and Zanzibar.

Ly'denberg, a town of the Transvaal or South African Republic, the neighbourhood of which is rich in gold-bearing quartz.

Madagas'car, the largest island of Africa, in the Indian Ocean, and separated from the continent by the Mozambique Channel. Area estimated at 230,000 square miles; its pop. estimated at from 2,000,000 to 4,000,000. The capital is **Antananarivo** or **Tananarivo**, in the centre of the island, with a pop. of 80,000. France claims protectorate powers over the N.W. part of the island.—*See* REMARKS, page 323.

Madeira, *mă-dā'ră*, a beautiful island, 35 miles in length, by 12 miles in breadth, off the N.W. coast of Africa. It consists of a mass of basalt, *Pico Ruivo* rising to the height of 5993 feet. It is famous for its wine and for its salubrious climate, which is very favourable to invalids suffering from pulmonary disease. It belongs to Portugal. Pop. 130,584.—32, 37 N. 16, 54 W.

Magadox'o, an Arabian town, on the Somali coast, E. Africa. Pop. 5000.

Mam'poor, or **Nga'mi**, a lake in the interior of S. Africa, 900 miles N. from Cape Town; it is about 60 miles long, and 12 or 14 miles broad.—21, 0 S. 22, 30 E. From its eastern side issues the River Zouga.

Manda'ra, a kingdom of N. Central Africa, S. of Bornou.

Manica, *mă-ne'să*, a town and petty state in the interior of S.E. Africa, tributary to the Portuguese.

Mareo'tis, Lake, a salt lagoon of the N.E. part of Lower Egypt, to the S.E. of Alexandria, running parallel to the Mediterranean, and leaving only a narrow strip of land, on which that city is built; it is 50 miles long and 20 miles broad.

Masenia, *mă-sā-ne'ă*, or **Maseña**, *mă-sān'ya*, a town of Central Soudan, N. Africa, the capital of Begharmi; it is 7 miles in circumference.

Mas'soua, or **Mas'sowah**, a seaport of Egypt, on an island in the Red Sea, the outlet of the Abyssinian trade in ivory, musk, wax, and coffee. It is one of the hottest places in the world.

Mauritius, *mau-rish'us*, an island in the Indian Ocean, 550 miles E. of Madagascar, belonging to Great Britain. It is 36 miles in length, 20 miles in breadth, and 120 miles in circumference. Area, 700 square miles; pop. 360,360.

Ma'via Country, a plateau on the E. coast of Africa, westward of Cape Delgado, inhabited by a simple-minded but very exclusive people.

Mejer'dah, a river of Africa, which, after a N.E. course of 200 miles, flows into the Mediterranean to the N. of Tunis.

Meq'uinez, a city of Morocco, N.W. Africa, province and 37 miles S.W. of Fez. Pop. 60,000.

Mer'oë, or **Mer'awe, Isle of**, a wide tract of S. Nubia, 400 miles long and 200 miles broad, between the Nile and its tributary the Atbara. The ancient town of the same name was situated a little to the S.W. of Jebel-Berkel; a modern town occupies part of the site.

Mesura'do, a rapid river of W. Africa; it rises in the mountains of Kong, and falls into the Atlantic at Monrovia.

Mesura'ta, a town of Tripoli, N. Africa, at the entrance of the Gulf of Sidra.

Mogadore, *mog-ă-dore'*, a fortified seaport of Morocco, N.W. Africa, on the Atlantic. Pop. 12,000.

Mom'bas, or **Mom'baz**, a seaport on an island off the coast of the mainland of Zanzibar, E. Africa. Pop. 6000.

Monastir, *mo-năs-teer'* (the monastery), a seaport of Tunis, N. Africa, on the Gulf of Sidra, 15 miles S.E. of Susa. Pop. 12,000.

Moroc'co, or **Maroc'co**, Arabic **Moghrib-el-Aksa** (the extreme west), ancient *Mauritania*, an empire in the N.W. of Africa. Area, 260,000 square miles; pop. 6,140,000. *See* REMARKS, page 322.

Moroc'co, or **Maroc'co**, one of the capital cities of the above empire, is situated on the N. side of Mount Atlas, in a vast plain covered with date and olive trees; it is famous for the manufacture of the kind of leather to which it gives name. Pop. 50,000.

Mossamedes, *mos-să-mā'des*, a Portuguese colony, 170 miles S. of Benguela, W. Africa. Pop. 4,400,000.

Mos'sel Bay, a bay on the S.E. coast of Cape Colony.

Mourzook', the capital of Fezzan, Tripoli, N. Africa. Pop. 3500.

Mozambique, *moz-am-beek'*, a territory belonging to the Portuguese, on the E. coast of Africa, S. of Zanzibar. The coast is fringed with coral islets,

one of which, in 15, 3 S. and 40, 49 , is the capital of the same name. Pop. of territory, 300,000; of town, 8000.

Mozambique Channel, a strait, or more properly an arm, of the Indian Ocean, between the mainland of E. Africa and the island of Madagascar; it is about 260 miles broad.

Nama'qualand, Great, the region in S. Africa inhabited by the Namaquas, the chief remaining tribe of the Hottentot race, N. of the Orange River, between the coast and the Kalihari Desert.

Namaqualand, Little, a division in the N. of the North-Western Province of Cape Colony, S. of the Orange River. Area, 20,635 square miles; pop. 12,233.

Natal', a British colony in S.E. Africa, founded in 1842. *See* REMARKS, page 318.

Negro, Cape (black cape), a promontory of Benguela, Lower Guinea, W. Africa.—15, 40 S. 12, 8 E.

Ngami. *See* **Mampoor.**

Niger, *ni'jer*, a great river of N.W. Africa, has its source in 10, 30 W. 8, 36 N., in the peak of a mountain chain called Mount Loma, where it is known as the *Tembi-Kundu*. Flowing N.E., it is called the *Joliba* as far as Timbuctoo. Below Timbuctoo it is called the *Quorra*, turns to the S.E. and S., and, after a course estimated at 2000 miles, falls by numerous mouths into the Bight of Benin.

Nigritia. *See* **Soudan.**

Nile, the river of Egypt, and one of the most celebrated streams of the Old World, was an object of wonder and veneration to the ancients, as it has been of eager curiosity to the moderns. The main branch, called *Bahr el Abiad*, or the White Nile, has its origin in an elevated region of lakes and countless streams extending from the equator southward 10° or 12° of latitude. Uniting at Khartoum, in Nubia, with the *Bahr el Azrek*, or Blue River, from Abyssinia, it forms one large stream, which flows through Nubia and Upper Egypt, where its banks are generally elevated. Near Cairo the valley widens, and the Nile, separating into two great arms, enters the broad plain of the Delta, which it encloses, and falls into the Mediterranean by the western mouth at Rosetta, and by the eastern at Damietta. The length of its course is supposed to be about 3000 miles.

Nu'bia (the land of gold), a country of Africa, traversed by the Nile, and bounded E. by the Red Sea and Abyssinia; S. by Abyssinia; and W. by the Desert. Area estimated at about 250,000 square miles. Pop. estimated at about 400,000. *See* REMARKS, page 315.

Nyang'we, one of the most important markets in the Manyema country, S. Central Africa. It was first visited by Dr Livingstone, and is situated on the right bank of the great Lualaba, in about 4 S. and 25 E. Here H. M. Stanley embarked, when, by sailing down the Lualaba, he was able to prove its identification with the Congo.

Nyassa, *nyás'sá* (the *n* and *y* are joined in the mouth, and not pronounced separately), a lake of the interior of E. Africa, about 250 miles long and 26 miles wide, between 10, 21 and 14, 25 S. Along its W. shore the Free Church of Scotland has established a number of mission stations under the collective name of *Livingstonia*. A steamer in connexion with the mission now plies on the lake.

Og'oway, or Og'owé, a large river of W. Africa, which reaches the Atlantic by several mouths, forming a large delta, not far to the S. of the Gaboon estuary.

Ol'ifant, or Ol'iphant River (the Dutch for *elephant*), rises in the mountains of the Cape Colony, and falls into the Atlantic.

Oran', a province of Algeria, N. Africa, having Morocco on the W., and the province of Algeria on the N.E. Area, 38,899 square miles. Pop. 600,000.

Oran, a strongly fortified seaport of Algeria, the capital of the above province, on the Mediterranean, 210 miles W.S.W. of Algiers. It was taken by the French in 1830, and occupied by them in 1831. Pop. 40,674

Or'ange, or Gariep', the largest river of S. Africa, rises in Basuto Land, flows S.W. and N.W., forming, under the name of the *Nu* or *Black Gariep*, the boundary between Cape Colony and the Orange Free State; in the S. of Griqualand West it receives the *Vaal* or the *Ky* or *Yellow Gariep*; it then traverses a most dreary and barren country, separating in its course Cape Colony from Great Namaqualand, and after draining an area of not less than 400,000 square miles, enters the Atlantic in 28, 30 S. and 16, 30 E.

Orange Free State, a tract of country in S. Africa, embracing an area of over 60,000 square miles. The

government is republican. Pop. 183,518, of which 61,022 are whites. *See* REMARKS, page 323.

Ovam'poland, a region in S.W. Africa, inhabited by a race forming a link between the Kaffir and true negro. The country contains valuable lodes of copper.

Palmas, Cape, *päl'-mäs*, a promontory of W. Africa, forming the western termination of the Ivory Coast.—4, 22 N. 7, 44 W.

Pem'ba, an island off the mainland of Zanzibar, on the E. coast of Africa. Pop. 10,000.

Pon'doland, an independent native territory of S. Africa, part of what was formerly known as Kaffraria. Pop. estimated at 200,000.

Port Lou'is, the capital of the island of Mauritius, in the Indian Ocean, E. of Madagascar; it is situated on its N.W. coast. Pop. 74,525.

Port Natal Bay, an inlet on the coast of Natal, S. Africa.

Porto Farina, *fä-re'nä*, a seaport of Tunis, N. Africa, on the site of the ancient *Utica*, at the mouth of the Mejerdah; it is called by the modern inhabitants *Garel-Mailah*, or "the cave of salt."

Port Said, a seaport of Egypt, on the Mediterranean, at the entrance to the Suez Canal; it is the principal coaling station for steamers passing through the canal. Pop. estimated at 10,000.

Potscherf'strom, or **Mooi River Dorp**, the largest town of the Transvaal or South African Republic, S. Africa, on the Mooi River, branches of which run through the streets, which are all planted with trees.

Preto'ria, the capital of the Transvaal or South African Republic, S. Africa, near the E. extremity of the Magaliesbergen, about 90 miles N.E. of Potscherfstrom.

Prince's Island, a small island in the Gulf of Guinea, W. Africa, belonging to Portugal. Pop. 4000.

Quillima'ne, a seaport of Mozambique, E. Africa, on the Quilimane River, the N. branch of the Zambezi, 15 miles from its mouth; it belongs to Portugal. Pop. 3000.

Quiloa, *ke'lo-ä*, **Kilwah**, or **Keelwa**, a small seaport of Zanzibar, situated on an island off the S.E. coast.

Rabatt', or **Rabat'**, a fortified seaport of Morocco, N.W. Africa, on the S. side of the Bu-Regreb, immediately opposite Sallee. Pop. 27,000.

Rab'ba, a town of the kingdom of Grando, Central Africa. Pop. 40,000.

Red Sea. *See* page 270.

Reunion, *re-yoon'yun*, formerly called **Bourbon**, a fertile island in the Indian Ocean, about 400 miles E. of Madagascar. It is 38 miles long and 28 miles broad. It was discovered by the Portuguese in 1545, but has belonged to the French since 1655, with the exception of the years 1810–14, when it was occupied by the British. Pop. 193,000.

Rio Gran'de (the great river), a river of Senegambia, W. Africa, which, after a course of about 400 miles, enters the Atlantic near Cape Roxo by an estuary 10 miles across.

Roset'ta, a town of Egypt, at the mouth of the western branch of the Nile. Pop. 15,002.

Roxo, Cape (red cape), on the coast of Senegambia, W. Africa.—12, 22 N. 16, 51 E.

Saf'fi, or **Azaf'fi**, a seaport of Morocco, N.W. Africa. Pop. 12,000.

Saha'ra, the largest desert on the face of the earth, is in N. Africa, bounded N. by Barbary; E. by Egypt and Nubia; S. by Soudan and Senegambia; and W. by the Atlantic. From E. to W. its length exceeds 3000 miles; its breadth varies from 1000 to 1200 miles; and its area is about 2,500,000 square miles. Pop. of the various oases estimated at about 1,000,000. *See* REMARKS, page 324.

St Denis, *seng deh-ne'*, capital of the French island of Reunion, in the Indian Ocean. Pop., with district, 36,000.

St Hele'na, an island of the South Atlantic, belonging to Great Britain. Pop. 5059. *See* REMARKS, page 319.

St Louis, *seng loo'e*, an island and town belonging to the French, at the mouth of the Senegal, off the coast of Senegambia, W. Africa. Pop. 15,758.

St Thomas, an island in the Gulf of Guinea, W. Africa, situated nearly on the equator. It belongs to Portugal.—**St Thomas, or Chaves**, the capital, on the N.E. coast, has a pop. of 5000.

Saldan'ha Bay, a bay on the S.W. coast of Cape Colony, S. Africa.

Sallee, or **Sale**, *sä-lā'*, a fortified seaport of Morocco, N.W. Africa, at the mouth of the Bu-Regreb. Pop. estimated at 12,000.

San Salvador', or **Ban'za**, *bän'zä*, a town of Lower Guinea, W. Africa, the capital of Congo, on a plateau near the left bank of the river Congo. Pop. about 20,000.

Sego, *sā'go*, a town of Soudan, Central Africa, the capital of Bambarra, on the Joliba. Pop. estimated at 30,000.

Sen'a, or Sen'na, a town on the right bank of the Zambezi, E. Africa, 110 miles W. of Quilimane.

Senegal', a large river of W. Africa, which has its source in the mountains of Kong, not far from the sources of the Gambia and the Rio Grande, and, after a course of about 1000 miles, falls into the Atlantic.—Also, a French colony at the mouth of the above river. Area, 96,529 square miles; pop. 220,863.

Senegam'bia, the name given to the countries of W. Africa watered by the Senegal, Gambia, and Rio Grande, having the Sahara on the N. and Upper Guinea on the S. This extensive region is divided into a number of states or kingdoms. The pop. is estimated at 12,000,000.

Sennar', a city of Nubia, the capital of the district of the same name, on the Bahr-el-Azrek, or Blue Nile. Pop. estimated at 9000.

Seychelles, *sā-shell'*, a group of 30 islands in the Indian Ocean, of which *Mahé* is the chief. They belong to Great Britain, and form a dependency of the government of the Mauritius. Pop. 16,000.

Sha'ry, a large river of N. Central Africa, flows N.W. through Begharmi, and enters Lake Tchad by several mouths, after a course of about 350 miles.

Shen'dy, a town of Nubia, on the E. bank of the Nile, 90 miles N.N.E. of Khartoum. Pop. 10,000.

Sher'boro, an island of W. Africa, opposite the mouth of Sherboro River, 40 miles S.S.E. of Sierra Leone.

Shimee'yu, a river of S. equatorial Africa, one of the head streams of the Nile; after a course of about 300 m., it falls into Speke Gulf, on the S.E. side of the Victoria Nyanza.

Shir'wa, a lake of Africa, about 14 S. from the equator, separated by a narrow isthmus from Lake Nyassa; it is about 60 miles long and from 10 to 23 miles broad.

Sho'a, the most S. of the three chief provinces of Abyssinia, situated between 8, 30 and 10 or 11 N. and 38—40, 30 E. Pop. 1,500,000.

Sid'ra, Gulf of, a large gulf on the coast of Tripoli and Barca, N. Africa.

Sier'ra Leo'ne, more correctly **Sierra Leona** (the mountain chain of the lioness), one of the West Africa colonial settlements belonging to Great Britain, founded in 1787. The climate is extremely unhealthy, especially to Europeans. Area about 470 square miles. Pop 60,546.

Siout', Osioot', or Essiout', the capital of Upper Egypt, on the Nile. Pop. 27,470.

Slave Coast, a country of Upper Guinea, W. Africa, extending from the Rio Volta to the Bay of Lagos.

Soco'tra, an island in the Indian Ocean, about 120 miles E. from Cape Guardafui. Pop. about 10,000.

Sofa'la, supposed by some to be the *Ophir* of Scripture, a country, with a town of the same name, on the coast of E. Africa, S. of the Zambezi.

Soko'to (the market-place), sometimes written **Sackatoo** and **Saccatoo',** a town of N. Central Africa, the capital of the kingdom of Houssa or Sokoto, on the Zirmie, a tributary of the Sokoto. Pop. 80,000.

Soudan', the name applied to the region of Central Africa, stretching southward from Nubia, but the limits of which are undefined. *See* REMARKS, page 324.

Spartel, Cape, *spar-tel'*, a promontory on the N.W. coast of Morocco, at the entrance to the Strait of Gibraltar. 35, 47 N. 5, 58 W.

Stan'ley Pool, a lake-like expansion of the River Congo, about 30 square miles in extent. It is named after the celebrated traveller Mr H. M. Stanley. The lat. of its upper entrance is 4, 6 S.

Sua'kin, or Sua'kim, a seaport of Nubia, on an island in the Red Sea, with a good harbour, a great place of embarkation for pilgrims on their way to Mecca. Pop. 4078.

Su'ez, a maritime town of Egypt, at the head of the W. arm of the Red Sea; being the S. terminus of the Suez Canal, it is an important station on the overland route to India. Pop. 13,498.

Suez, Isthmus of, connects the continents of Asia and Africa. A canal across it, navigable by large vessels, connects the Red Sea with the Mediterranean. It is about 100 miles in length.

Syene. *See* **Assouan.**

Table Bay, an inlet of the Atlantic Ocean, on the S.W. coast of Cape Colony.

Table Mountain (named from its peculiar shape and flat summit), in Cape Colony, S. Africa, at the back of Cape Town; it is 3816 feet high, and is

often covered with a white cloud, which is called the "Table Cloth."

Tafilet', a province and town of Morocco, N.W. Africa, S. of Mount Atlas.

Tanganyi'ka (mixing of the waters), a lake in Central Africa, discovered by Captains Burton and Speke in 1858, about 600 miles from the E. coast, and about 250 miles S. of the equator; it is about 330 miles long, and from 20 to 60 miles broad; its height above sea-level has been variously estimated by the following travellers:—Thomson, 2618 feet; Livingstone, 2624 feet; Cameron, 2710 feet; and Stanley, 2756 feet.

Tangier, *tăn-jeer'* (the city protected by God), a strongly fortified seaport of Morocco, N.W. Africa, on the Strait and 38 miles W.S.W. of Gibraltar. Pop. 20,000.

Tan'tah, a town of Lower Egypt, on the Damietta branch of the Nile; it contains a shrine, which is visited annually by 150,000 pilgrims. Pop. 60,000.

Taroudant', or **Terodant'**, a city of Morocco, N.W. Africa, the capital of the province of Sus, on the River Sus, 125 miles S.W. of Morocco. Pop. 21,000.

Tchad, also written **Chad**, a lake of Central Africa, about 150 miles long and 125 miles broad.

Tel-el-Kebir, *tel-el'-kē-beer'*, a village of Lower Egypt, in the centre of the fertile district called *El-Wädy*, to the S. of the Ismailia Canal. Here the Egyptian military rebels under Arabi Pasha established a strongly fortified camp, which was taken, by a midnight assault, by a British force under General Wolseley, on 13th Sept. 1882. This achievement quelled the revolt.

Tete, *tā'tā*, a large town of E. Africa, on the Zambezi, belonging to Portugal, 100 miles N. of Sena.

Tetuan', a fortified seaport of Morocco, N.W. Africa, kingdom of Fez, on the Mediterranean, within the Strait of Gibraltar, 33 miles S.E. of Tangier. Pop. 20,000.

Tigre, *te'grā*, a small province in the N.W. of Abyssinia, comprising the basin of the Mareb.

Timbuc'too, a commercial town of Soudan, Central Africa, situated about 8 miles from the bank of the Niger, on the borders of the Great Desert. Pop. about 50,000.

Tlemsen', or **Tlemeçen'**, a town of Algeria, N. Africa, 68 miles S.W. of Oran. Pop. 18,800.

Transkeian Territories, *trans-kā'an*, the name given to the country lying between the Great Kei River, S. Africa, and the W. boundary of Natal. They embrace the semi-independent districts of *Fingoland*, *Tambookieland*, *Nomansland*, etc.; also the independent district of *Pondoland*. Total pop. estimated at 475,000.

Transvaal', or **South African Republic**, an inland territory of S.E. Africa, lying between 22 and 28 S. and 25 and 30½ E. Area estimated at 114,000 square miles; pop. 815,000, of which about 39,000 are whites. *See* REMARKS, page 323.

Trip'oli, one of the Barbary states, N. Africa. Pop. 600,000. *See* REMARKS, page 316.

Trip'oli, a town of N. Africa, the capital of the above state. Pop. 30,000.

Tris'tan d'Acunha, *dā-koon'yā*, the principal of three small islands in the S. Atlantic, about 1700 miles to the W. of the Cape of Good Hope, and nearly midway between Africa and America. Pop. 109. The other islands are called *Nightingale Island* and *Inaccessible*.

Tuat, or **Twat**, an oasis of the Sahara, Central Africa, nearly equidistant from Morocco, Algeria, Tunis, and Fezzan.

Tu'nis, one of the states of Barbary, N. Africa, situated between Algeria and Tripoli, and bounded on the N. and N.E. by the Mediterranean. Before France interfered in the government of the country in 1881, Tunis was regarded as next to Algeria, the most enlightened of the Barbary states. Pop. 2,000,000. *See* REMARKS, page 316.

Tunis, a city of N. Africa, the capital of the above state, on the W. side of a lagoon, in 36, 46 N. and 10, 9 E. It has a more extensive commerce than any other town in Barbary. About 10 miles N.W. of the city are the ruins of ancient *Carthage*, the rival of Rome. Pop. 140,000.

Tunis, Gulf of, an inlet of the Mediterranean, extending inland for 30 miles between Capes Bon and Farina, N. Africa; it is 45 miles wide at its entrance, and affords good anchorage for ships of the largest size.

Uitenhage, *oi-ten-hā'gheh*, a town of Cape Colony, the capital of a division of the same name, on the Zwartkops, 18 miles N.W. of Port Elizabeth, with which it is connected by a railway. Pop. 3693.

Ujiji, *oo-jee'jee*, an Arab village of Central Africa, on Lake Tanganyika,

where Mr H. M. Stanley found Dr Livingstone, 28th October 1871.

Ukerewe, *ook-er-e'weh*, a populous and extensively cultivated country on the S. E. shore of the Victoria Nyanza, Central Equatorial Africa.

Vaal, or **Ky** or **Yellow Gariep**, a river of S. Africa, rises in the Quathlamba Mountains, flows S.W., forming the southern boundary of the Transvaal or South African Republic, and unites with the Gariep or Orange River in the S. of Griqualand West.

Verde, Cape (green cape, *i.e.*, fringed with green palms), a bold headland stretching into the Atlantic, and forming the extreme W. point of Africa.—14, 44 N. 17, 30 W.

Verde, Cape, Islands (green islands), a group in the Atlantic belonging to Portugal, about 320 miles W. from Cape Verde. The largest are *Santiago*, *San Antonio*, and *St Nicholas*. *Fogo*, one of the smallest, has a volcano 9175 feet high. Pop. 99,315.

Victoria Nyanza (named in honour of Queen Victoria: *Nyanza* means a lake or inland sea, and is pronounced by the native tribes round the lake either *nee-yăn'ză*, or *nee-yăn'jă*; the Arabs, however, pronounce it *n'yan'ză*, the *n* and *y* being joined in the mouth, and not pronounced separately), a lake in Central Africa, on the equator; it is studded with islands, is about 300 miles in length, 90 miles in breadth, has a superficial area of 21,500 square miles, and is 4168 feet above the level of the sea. This lake was discovered by Captain Speke in 1858, and circumnavigated by Mr H. M. Stanley in 1875; it and the Albert Nyanza, about 100 miles N.W., are great reservoirs of the White Nile.

Vivi, *ve've*, a station on the River Congo, 115 miles from the coast, founded by the International Association for investigating the countries watered by the Congo.

Vol'ta, a river of Guinea, W. Africa, rises in the Kong Mountains, forms the boundary between the Gold Coast and the Slave Coast, and enters the Gulf of Guinea at Adda, after a course estimated at 360 miles.

Wal'fisch Bay, or **Walvisch**, an extensive harbour on the coast of Damara, S.W. Africa, under the jurisdiction of Great Britain.

West Africa Settlements. *See* REMARKS, page 318.

Whydah, *hwid'dă*, a seaport on the Slave Coast, Upper Guinea, W. Africa. Pop. 15,000.

Ya'oori, or Yaouri, *you're*, a populous state of Soudan, Central Africa.

Yaoori, or Yaouri, a large town of Soudan, Central Africa, the capital of the above state, near the Joliba, 65 miles N. of Boussa; it is surrounded by a clay-built wall, nearly 24 miles in circumference, and is entered by 8 gates, all well fortified.

Yol'la, a town of Central Africa, the capital of the kingdom of Adamawa, on the Chadda or Benué, about 25 miles from Mount Atlantika, the highest mountain in Soudan. Pop. estimated at 12,000.

Yar'riba, or Yor'uba, a country of W. Africa, E. of Dahomey, and N. of Benin. Pop. estimated at 2,500,000.

Zago'shi, an island in the Niger, W. Africa, opposite Rabba, about 15 miles long and 3 miles broad.

Zaire. *See* **Congo**.

Zambe'zi, a large river of S. Africa, formed by the junction of the *Kwando*, *Leeba*, and the *Leeambye*. *See* REMARKS, page 325.

Zanzibar', a country of E. Africa, stretching along the coast to the N. of Mozambique. Of the coast stations, the best known is *Bagamoyo*, at the mouth of the Kingani River, opposite the island of Zanzibar; it is the seaward terminus of the main caravan route into the interior—a route followed by many of the recent explorers of Central Africa, viz., Burton, Speke, Grant, Stanley, Cameron, and Thomson. Off the coast is the island of *Zanzibar*, where the Sultan resides. Pop. 80,000. *See* REMARKS, page 323.

Zaria, *ză're-yă*, a town of Sokoto or Houssa, Central Africa. Pop. 40,000.

Zu'luland, a country of S.E. Africa, inhabited by a brave Kaffir tribe called Zulus. *See* REMARKS, page 325.

AMERICA

Is bounded N. by the Arctic Ocean; W. by the Pacific Ocean; S. by the Southern Ocean; E. by the Atlantic Ocean. It is divided into North and South America by the Isthmus of Panama, which belongs politically to South America; but the states situated between Mexico and the Isthmus of Panama are often spoken of collectively as Central America. Its area, including islands, is estimated at about 16,000,000 square miles, with a population of at least 100,000,000. Area and population are thus distributed:—

	Square Miles.	Population.
North America,	9,000,000	70,000,000
South America,	7,000,000	30,000,000

Divisions.	Chief Towns.
In North America—	
Greenland	Godthaab, Godhavn.
Dominion of Canada	Ottawa, Montreal, Quebec.
Newfoundland, with Labrador	St John's.
United States of North America, with Alaska	Washington, New York, Philadelphia, Chicago, St Louis, Boston.
Mexico	Mexico, Guadalajara, Puebla.
British Honduras	Belize.
Guatemala	New Guatemala.
Honduras	Tegucigalpa.
San Salvador	San Salvador.
Nicaragua	Managua, Leon, Granada.
Costa Rica	San José.
In South America—	
United States of Colombia	Bogota, Popayan, Panama.
Venezuela	Caraccas, Valencia, Barquisimeto.
Ecuador	Quito, Guayaquil, Cuença.
Peru	Lima, Cuzco, Arequipa, Callao.
Bolivia	Sucre, La Paz, Cochabamba.
Chili	Santiago, Valparaiso.
Argentine Republic	Buenos Ayres, Cordova, Mendoza.
Paraguay	Asuncion.
Uruguay	Montevideo.
Brazil	Rio Janeiro, Bahia, Pernambuco.
Guiana, French	Cayenne.
„ Dutch	Paramaribo.
„ British	Georgetown.
In Islands—	
Dominican Republic	San Domingo.
Hayti	Port-au-Prince.
European Possessions	See page 356.

Islands.—In North America: Greenland; Baffin Land, and others in the Arctic Archipelago; Southampton; Anticosti; Newfoundland; Prince Edward; Cape Breton; the Bermudas; most of the West Indies, viz., the Bahamas, the Greater and Lesser Antilles, the Virgin Isles connecting the two groups of Antilles, and the Coast Islands; Vancouver, Queen Charlotte, and Prince of Wales; Kodiak and Aleutians. In South America: Trinidad and a few of the West Indies; Falklands; Tierra del Fuego, and the Archipelago of Chilian Patagonia; Juan Fernandez; Galapagos.

Peninsulas.—Nova Scotia, Florida, Yucatan, Lower California, Alaska; all in N. America.

Capes.—In North America: Farewell, Chudleigh, Race, Canso, Sable, Cod, Hatteras, Catoche, Gracias a Dios, St Lucas, Prince of Wales, Point Barrow. In South America: St Roque, Frio, Horn.

Gulfs and Bays.—In North America: Baffin, Hudson, and James Bays; Gulf of St Lawrence; Fundy and Chesapeake Bays; Gulf of Mexico; Campeachy and Honduras Bays; Gulf of California. In South America: Gulfs of Darien, Venezuela, Paria, San Matías, St George, Guayaquil, Panama.

Straits.—In North America: Smith Sound; Davis, Hudson, Belleisle; Florida Channel; Juan de Fuca, Behring. In South America: Magellan.

Rivers.—In North America: Nelson, Churchill; Great Fish, Coppermine, Mackenzie; Yukon; Fraser; Columbia, Colorado, Rio Grande del Norte, Mississippi. In South America: Magdalena, Orinoco, Amazon, Tocantins, La Plata.

Lakes.—In North America: Great Bear, Great Slave, Athabasca, Winnipeg; Superior, Michigan, Huron, Erie, Ontario; Champlain, Great Salt; Nicaragua. In South America: Titicaca.

Mountains.—In North America: Rocky and Alleghany. In South America: Andes, Sierra Parima, and the Brazilian.

REMARKS.

America extends from about 82° N. to 56° S. lat., and from 35° to 168° W. long. Its length from N. to S. is about 10,000 miles; its average breadth about 2000 miles.

The natural features of America are characterized by size and simplicity. The Rockies and Alleghanies in North America, the Andes, the Sierra Parima, and the Brazilian watershed in South America, with two or three great river-basins in each, account for almost the whole of the continent. The Isthmus of Panama, low as well as narrow, forms a natural division of America into north and south, the line of the Rockies and Andes being there fairly interrupted. North and South America are both pear-shaped, the point of the pear pointing in each case southwards. The Rockies in North America run along the western coast; so do the Andes in South America. Both the Rockies and the Andes split up into several ranges and meet again, enclosing lofty table-lands, two of them with continental drainage,—that of Great Salt Lake in North America, and that of Lake Titicaca in South America. The St Lawrence and Mississippi Rivers correspond to the Amazon and La Plata in direction on the whole, and also in that they all open up the interior to navigation. Farther, as a gentle undulation of only a few miles is all that separates the St Lawrence and the Mississippi basins in North America, similarly slight is the watershed between the Madeira branch of the Amazon and the Paraguay branch of the La Plata in South America. The Laurentian lakes of North America are the one feature to which no parallel is found in South America: they contain by far the largest body of fresh water in the world.

In respect of climate, there is on the whole more moisture and less heat in the New World than in the Old. Chief causes of this are the smaller breadth of America, the presence throughout almost its whole length of snow-clad mountains, the nearness of icy Greenland in the north, and of the Antarctic continent in the south, and the circumstance that the latitude of the African Sahara is occupied in America by the Gulf of Mexico. The intertropical regions have, as elsewhere, a moist, warm climate, unhealthy in the lower grounds. In the temperate zone of North America, the eastern side of the Rockies suffers from extremes of heat and cold; the western enjoys the milder climate of peninsular Europe. An arctic current, setting south from Greenland, and running along the coast of North America, lowers the temperature there to such a degree that the Atlantic off New York is as cold as the Arctic Ocean off North Cape. On the other hand, the lowness of the watershed between the Mississippi and St Lawrence basins allows the warm air of the Gulf of Mexico to stream northwards so far that wheat ripens close to the 60th parallel. On the Pacific coast of South America there is a rainless region extending from near the equator, through about 30°, to near Valparaiso. This is the region of the S.E. trades, which leave all their moisture on the eastern slopes of the Andes. South of it, western winds prevail, bringing rain to the Chilian coast-lands; north of it, the Andes, sinking to the plain, allow the N.E. trades to bring over them moisture for the Pacific slope.

America is possessed by races of European origin; British

America and the United States of North America by Teutonic races, Protestant for the most part, and all the rest by Latin races, almost wholly Roman Catholic. The native races, though less widely distributed now than when they had the continent to themselves, are said to be not much less numerous. They are dark-skinned Eskimo in the Arctic regions, and elsewhere copper-coloured Indians, those of South America being less robust than those of North America. Negroes, the descendants of African slaves, very numerous in the United States of North America and in Brazil, form the bulk of the population in the West India Islands. Intermarriage is more frequent between whites and Indians than between whites and blacks. In Mexico and Peru, countries in which the Indians had attained to considerable civilisation prior to the Spanish conquest, there is a very large population of mixed Spanish and Indian blood. Spanish America has broken up into a multitude of republics. Portuguese America remains united in the Empire of Brazil. The British colonies whose independence was acknowledged in 1783, have expanded into the United States of North America, now the leading state of the New World, containing as it does one-half of the population of the whole American continent. San Domingo, the second largest of the West Indian Islands, is divided between two negro republics.

EXERCISES.

How is America bounded? By what is it divided into North and South? Which of the two divisions is both the larger and the more populous? Give the area and the population of the whole. What is meant by Central America? Name the six divisions of Central America. Which two of them don't extend from sea to sea? What detached territories go with Newfoundland and the United States of North America respectively? Which is the largest state in South America? Which one alone has territory on both the Atlantic and the Pacific?

What four islands almost surround the Gulf of St Lawrence? What islands run out towards Cape Lopatka in Asia? How are the West Indian Islands grouped? Of those near the coast of South America, name the largest. Name the largest two of all. What peninsulas point northward, southward, and eastward respectively? Point out Capes Farewell, Catoche, Horn? etc. To what bays do Davis Strait and Hudson Strait respectively lead? What bays are on either side the peninsula of Yucatan? What gulfs are on either side the Isthmus of Panama? What islands are separated from the mainland by Magellan and Juan de Fuca Straits respectively? Name two rivers flowing into Hudson Bay. Name three rivers flowing into the Arctic Ocean. What three great lakes drain into Mackenzie River? What five great lakes drain into the St Lawrence?

Explain the statement that the natural features of America are grand and simple. Draw a parallel between North and South America in respect of shape, mountains, river-basins, and watersheds. To what feature in North America is there no correspondent in South America? Compare the climate of the New World with that of the Old. Account for the difference. Which side of North America has the milder

climate? What makes the sea off New York extremely cold? What makes it possible to grow wheat on Mackenzie River? What are the limits of the rainless region on the Pacific coast of South America? Account for the rainlessness of that region, and for the rainfall north and south of it.

What parts of America are possessed by Teutonic and Latin races respectively? Give some account of the two native races. Where do negroes abound? With which of the native races do whites intermarry most? In what states has this intermarriage taken place on the largest scale? What has been the fate of Spanish and Portuguese America respectively? Which is the most powerful state in South America? Show that the United States of North America is the leading state of the New World. What island is divided between two negro republics?

GREENLAND

Is a Danish possession. This ice-capped region is the second largest island on the globe, inferior only to Australia. The population is about 10,000, of whom 250 are Europeans, and the rest Eskimo. These have adopted the Lutheran Christianity of the Danes. Some little cultivation is possible during the short summer: the sea yields fish in abundance, and seals, which are still more highly prized, because the seal supplies clothing and cordage, as well as food.

BRITISH NORTH AMERICA

Is bounded N. by the Arctic Ocean; W. by Alaska and the Pacific Ocean; S. by the United States; E. by the Atlantic Ocean. Its area is estimated at about 3,500,000 square miles, and its population at 4,500,000.

Divisions.	Chief Towns.
Dominion of Canada	Ottawa.
Nova Scotia and Cape Breton Island	Halifax.
Prince Edward Island	Charlotte Town.
New Brunswick	Fredericton.
Quebec Province	Quebec.
Ontario Province	Toronto.
Manitoba and Kewatin	Winnipeg.
Assiniboia	Regina.
Saskatchewan	Prince Albert.
Alberta	Calgary.
Athabasca	?
North-West Territories	?
British Columbia	Victoria.
Newfoundland, with Labrador	St John's.

REMARKS.

British North America extends from 42° N. lat. to the Arctic Ocean, and from 52° 43′ to 141° W. long. The extreme length from east to west is about 3000 miles; the breadth from north to south, about 2000 miles. The boundary with the United States runs along the 49th parallel from the Pacific to the Lake of the Woods, whence it is continued by a forest-clearing to the Laurentian lakes, through which and down the St Lawrence a short way it goes, reaching the Atlantic by a second forest-clearing that follows, on the whole, the southern watershed of the Laurentian basin.

British North America consists of the Laurentian basin, the arctic slope, a sub-arctic slope towards Hudson Bay, and the Pacific slope.

The Laurentian basin is narrow in proportion to its length, and low, the surface of the Laurentian lakes being only about 600 feet above the ocean-level. Montreal is the limit of tidal navigation; but ships of 1400 tons burden now sail to the head of Lake Superior, the rapids between Montreal and Kingston being avoided by the St Lawrence canals, while the Falls of Niagara, between Lakes Erie and Ontario, are turned by the Welland Canal, and the rapids of St Mary, between lakes Huron and Superior, by a canal on United States ground. Ice, solid above Quebec, floating below it, keeps this waterway closed during nearly half the year. The provinces of Quebec and Ontario, which occupy the Laurentian basin, constitute Canada proper, and are still named Canada East and Canada West respectively. They were the nucleus of what is now called the Dominion of Canada, and they still contain the bulk of the population. Canada East having been originally a French colony, its inhabitants, mostly of French descent, speak French and profess the Roman Catholic religion.

The arctic and sub-arctic slopes are both low-lying, and their watershed is so imperfect that several lakes are common to the headwaters of Churchill and Mackenzie rivers. The arctic slope is scarcely habitable; but that portion of the sub-arctic slope which lies between Lake Winnipeg and the Rocky Mountains has won for itself the name of "fertile belt," and is being rapidly settled. On Peace River winter is less severe than farther south, owing to warm air from the Pacific streaming in through low passes in the Rockies. Farther south, but still within British territory, the Rocky Mountains attain their greatest height in Mounts Hooker and Brown, the former somewhat lower, the latter somewhat higher than Mont Blanc. The "fertile belt" is contained in the provinces of Manitoba, Assiniboia, Saskatchewan, Alberta, and Athabasca; and as outlet for the produce of this region, a railway is proposed from Winnipeg to Port Nelson on Hudson Bay, which is open to shipping during a quarter of the year.

British Columbia, which occupies the Pacific slope, is the only

mountainous province in the Dominion. The northern portion of it is sub-arctic in character. In the south, the coast-land and Vancouver Island, which also is mountainous, enjoy a mild climate, similar to that of the British Isles; but the inland plateaux are liable to extremes of temperature, and are treeless from want of rain, which the coast-ranges intercept. How far we are from realizing the extent of the British Empire, or even of the Canadian Dominion, may be felt by considering that British Columbia alone is larger than the British Isles and France together.

The Gulf provinces, by which name New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland, the last not yet a member of the Dominion, are grouped together, devote themselves to fishing and lumbering as much as to farming, if not more. There being only two seasons in the Canadian year, summer and winter, the latter long and severe, outdoor farm work is confined to one-half of the year. In Prince Edward Island, farming is the main business; in Newfoundland, fishing. The forests have been so far cleared up the St Lawrence that the coal of Nova Scotia is in demand at Montreal. Nova Scotia has iron-ore as well as coal; the Canadian shores of Lake Superior are rich in copper and silver, and the Lake of the Woods district yields gold. The discovery of coal on the Saskatchewan, Bow, and Pelly rivers is furthering the settlement of the "fertile belt," which is a comparatively treeless prairie.

The several provinces of the Dominion have, like Newfoundland, each a legislature of its own; but they have also a common parliament of two houses, which meets at Ottawa, the residence of the Governor-general representing the Queen. The provinces are being connected by railways from ocean to ocean. Already the Intercolonial runs from Truro in Nova Scotia, by St John in New Brunswick, to Rivière du Loup on the St Lawrence in Quebec Province; whence the Grand Trunk continues the route into Ontario, crossing the St Lawrence at Montreal by a tubular bridge. From Ontario, the connexion with the Pacific coast, *viâ* Winnipeg, is being rapidly completed by the Canadian Pacific Railway. A common national feeling is shown by the maintenance of a militia in which are enrolled all the men between eighteen and sixty years of age. **Ottawa,** the political capital, is situated in Ontario on the River Ottawa, which separates Ontario from Quebec Province. The river scenery in the neighbourhood is said to surpass that of the Rhine. Tame as the landscape usually is east of the Rocky Mountains, there are countless exceptions on the rivers. The Lake of the Woods, with its 2000 islets, is described as a paradise of sylvan beauty. The glory of Niagara Falls, and of the Lake of 1000 Islands, at the foot of Lake Ontario, is divided between the Dominion and the United States. Montreal and Kingston, at opposite ends of the St Lawrence canals, are commercially the most important towns. In the far west, Winnipeg, with railway

communication in all directions, promises to become a great centre of trade.

Off the S. coast of Newfoundland are the small French islands, St Pierre and Miquelon, with a fishing population.

Far out in the Atlantic, east of the United States, are the Bermudas, capital **Hamilton**, a British possession. The group enjoys perpetual spring; and the most profitable industry is that of supplying New York with early vegetables.

EXERCISES.

What rank does Greenland hold among the islands of the globe? What of the inhabitants? Why do they prize the seal above all else within their reach? How is British North America bounded? What is its area in square miles? What is its population? How many provinces are there in the Dominion of Canada? Which of them is an island? Which of them is on the Pacific coast? Of what provinces are Halifax, Quebec, Toronto, and Winnipeg the capitals respectively? What colony is outside the Dominion?

Between what degrees of latitude and longitude is British North America situated? What are its length and breadth? Describe its boundary with the United States. Into what four regions is it naturally divided? Describe the Laurentian basin. By what canals is navigation up to Lake Superior facilitated? What prevents the navigation of the upper St Lawrence during half the year? Which two provinces constitute Canada proper? Which province is mainly French? What about the watershed of Churchill and Mackenzie rivers? Where is the "fertile belt?" Account for the comparatively mild winter on Peace River. Name the two highest summits of the Rocky Mountains, and compare them with Mont Blanc. What railway is proposed by way of outlet for the produce of the "fertile belt?" In what five provinces does the "fertile belt" lie?

Describe the surface and climate of British Columbia. Account for the scanty rainfall on the inland plateaux. Give some notion of the size of British Columbia. Name the four Gulf provinces. In which of them is farming the chief industry? How is Canadian farm work limited by the climate? In which of the Gulf provinces is fishing the chief industry? Which of them ships coal to Montreal? On what rivers of the "fertile belt" has coal been found? What places are rich in iron-ore, in copper and silver, and in gold respectively?

How is the Dominion governed? Trace the railways by which the provinces communicate from ocean to ocean. Where does the Grand Trunk cross the St Lawrence, and how? On what scale is the Canadian militia? Give some account of Ottawa. Which lake is a paradise of sylvan beauty? What two famous natural scenes are situated between Canada and the United States? Which two towns are commercially the most important in the Dominion? Which is the most rising town in the far west?

Name two French islands off Newfoundland. Where are the Bermudas? What is their most profitable industry?

THE UNITED STATES OF NORTH AMERICA

ARE bounded N. by British North America; W. by the Pacific Ocean; S. by Mexico and the Gulf of Mexico; E. by the Atlantic Ocean. Their area is 3,148,147 square miles, and their population upwards of 50,000,000, of whom more than 5,000,000 are negroes.

Divisions.	Chief Towns.
I. North-Eastern or New England States:	
Maine	Augusta, Portland, Bangor, Bath.
New Hampshire	Concord, Manchester, Portsmouth, Dover.
Vermont	Montpelier, Burlington, Middlebury.
Massachusetts	Boston, Lowell, Salem, Cambridge.
Rhode Island	Providence, Newport.
Connecticut	Hartford, Newhaven, Norwich.
II. Middle States:	
New York	Albany, New York and Brooklyn, Buffalo.
Pennsylvania	Harrisburg, Philadelphia, Pittsburg.
New Jersey	Trenton, Newark, Jersey City.
Delaware	Dover, Wilmington.
Maryland	Annapolis, Baltimore.
III. Southern States:	
(1.) *Atlantic States.*	
Virginia	Richmond, Norfolk, Petersburg.
North Carolina	Raleigh, Wilmington, Newbern.
South Carolina	Columbia, Charleston.
Georgia	Atlanta, Savannah, Augusta.
(2.) *Gulf States.*	
Alabama	Montgomery, Tuscaloosa, Mobile.
Florida	Tallahassee, St Augustine, Pensacola
Mississippi	Jackson, Natchez, Columbus.
Louisiana	New Orleans, Bâton Rouge.
Texas	Austin, Houston, Galveston.
IV. The Pacific States:	
California	Sacramento, San José, San Francisco.
Nevada	Carson City, Virginia.
Oregon	Salem, Portland.
V. North-Western States:	
Nebraska	Lincoln, Omaha, Nebraska.
Iowa	Des Moines, Dubuque, Davenport.
Minnesota	St Paul, St Anthony.
Wisconsin	Madison, Milwaukee, Racine.
Michigan	Lansing, Detroit.
Illinois	Springfield, Chicago, Peoria.
Indiana	Indianapolis, New Albany, Madison.
Ohio	Columbus, Cincinnati, Cleveland.

Divisions.	Chief Towns.
VI. Mid-Western States:	
West Virginia	Wheeling, Charleston.
Kentucky	Frankfort, Louisville, Covington.
Tennessee	Nashville, Memphis, Knoxville.
Missouri	Jefferson City, St Louis, Kansas City.
Kansas	Topeka, Leavenworth.
Arkansas	Little Rock.
Colorado	Denver, Golden City.
VII. Territories not yet erected into States:	
Alaska	Sitka or New Archangel.
Washington	Olympia.
Idaho	Boisée City.
Montana	Virginia City, Helena.
Dakota	Yankton.
Wyoming	Cheyenne.
Utah	Great Salt Lake City.
Arizona	Tucson, Mojave.
New Mexico	Santa Fé.
VIII. Indian Country, a native reserve.	
IX. Federal District of Columbia	WASHINGTON.

REMARKS.

The United States (excluding Alaska) extend from 25° to 49° N. lat., and from 67° to 125° W. long. Their length, from east to west, is 2700 miles; their breadth, from north to south, 1650 miles. The Atlantic slope, the Missouri-Mississippi basin, the table-lands within the system of the Rocky Mountains, and the Pacific slope, account for the whole of this vast region, except the fringe of country belonging to the Laurentian basin.

The Atlantic slope is neither fertile nor picturesque. Down to Long Island the coast is hilly; thence it is a sandy plain, with marshes in its southern half, the surface rising gradually to the Alleghany Mountains, which are distant about 250 miles from the shore. The Alleghanies consist of four main ranges, which, with the intervening valleys, measure 100 miles across in Pennsylvania, nearly in the middle of their length. Their two highest summits rise towards their extremities, one in New Hampshire, the other in North Carolina, both upwards of 6000 feet high. Through gaps in the Alleghanies, the Hudson, Delaware, and Potomac rivers find a passage to the Atlantic. Between the Alleghanies and the Rocky Mountains lies the Missouri-Mississippi basin, containing the largest tract of rich soil in the United States. So much of it as lies west of the 100th meridian is barren from scanty rainfall; the rest is divided between prairie-land on the right bank of the Mississippi and forest-land on the left bank. The basin is called Missouri-Mississippi, because the Missouri is the longer affluent, and at the

confluence above St Louis delivers a larger volume of water than does the Mississippi, which gives name to the united stream.

The Mississippi branch issues from lakelets on the low watershed with the Laurentian basin, and flows through a beautiful and picturesque country. The Missouri rises in the Montana Rockies, which form the northern end of the true dome of North America, since from them descend the three great rivers, Missouri, Columbia, and Saskatchewan. It works its way out and down through the grandest scenery, a gorge of 5¾ miles, with perpendicular walls 1200 feet high, and then 16½ miles of rapids, ending in the Great Falls. To these falls, 2540 miles from its confluence with the Mississippi branch, the Missouri is navigable when the water is high. The Mississippi branch is navigable to the Falls of St Anthony, above St Paul, Minnesota; by small craft, even higher up. The principal tributaries to the united stream are the Ohio, on the left bank, the Arkansas and Red River on the right. On the lower Mississippi and its mouths, which form a delta 150 miles in breadth, the river often breaks the embankments raised to confine it, overflowing destructively, and making new channels for itself. The Mississippi, 4506 miles long when measured up the Missouri branch, is deemed the longest river in the world.

About the 40th parallel, the table-lands within the Rocky Mountains attain a breadth of 1000 miles, and an average elevation of about 5000 feet. Here the Rockies proper are only the landward buttress of the table-lands, the seaward buttress being called Cascade Range, and farther south Sierra Nevada. West of the wild and picturesque Wahsatch Mountains, about the centre of the table-land region, lies Fremont's Basin, a saucer of continental drainage 450 miles in diameter, containing Great Salt Lake. The table-lands north and south of this basin are drained respectively by feeders of the Columbia and the Rio Colorado. The latter river is remarkable for its *cañons*, or deep river-gorges: for 600 miles it flows about 3000 feet below the general surface of a waterless country. The highest mountains within the United States are found in Colorado, which contains fifteen peaks exceeding 14,000 feet above the ocean level; but the strangest scenery lies in the N.W. corner of Wyoming, on the Upper Yellowstone, a tributary to the Missouri, where Congress has set apart a district 65 miles by 55 miles as a National Park. Rocks, curiously shaped, and painted in the brightest colours by hot springs, mud-volcanoes, and geysers surpassing those of Iceland, are among the wonders of this district. Hereabouts also is the Two-Ocean Pass, so called because of a lake in it which has two outlets, one to the Atlantic the other to the Pacific. The ascent to the Rocky Mountains from the east side is extremely gradual; the descent from the table-land on the Pacific side is extremely abrupt. On the Pacific side, some of the wonders of the Upper Yellowstone are reproduced in Geysers Valley, 60 miles from San Francisco, California; and Yosemite Valley, nearly in the centre of the same state, is famed for its precipices and waterfalls.

The milder temperature of the Pacific slope make it the garden and orchard of the United States; the orange groves of southern California vying with those of Florida. Everywhere else in the United States the heat of summer and the cold of winter are excessive, and the transition from one of these seasons to the other is rapid; even at New Orleans few winters pass without frost. The low watershed of the Missouri-Mississippi basin, towards the north, allows the arctic cold to come far down. The Mississippi has been frozen over at St Louis, which is in the latitude of Lisbon; and the National Park on the Upper Yellowstone, partly because of its lying 6000 feet above the ocean-level, has a winter too severe for stock-raising, and a liability to frosts in summer, which forbids tillage. Because of the great summer heat, maize is the grain most extensively grown in the north as well as in the south. Cotton, tobacco, sugar, and rice, are the staples of the south. California is the wheat state. West of the 100th meridan, because of scanty rainfall, irrigation is generally needed for successful tillage.

The mineral wealth of the United States has been developed with an energy worthy of its greatness. The Appalachian coal-field extends, in the line of the Alleghanies, from the state of Pennsylvania to that of Alabama. Pennsylvania takes the lead in both coal and iron, Michigan in copper, Nevada in silver, California in gold. In no country is trade better served by steam navigation on inland waters, by railways and telegraphs. Besides several trans-continental lines which converge on San Francisco, the Northern Pacific Railroad has two western termini, Portland on Columbia River, and Tacoma on Paget Sound; and, by means of the Sonora Railroad in Mexican territory, still another Pacific outlet has been obtained at Guaymas, on the Gulf of California. The foreign trade is carried on mostly in foreign bottoms. The articles sent to Britain being chiefly food-stuffs and raw cotton, while manufactured cotton, and iron wrought and unwrought, are taken in return.

The United States is a Federal Republic, which, besides absorbing British settlements in the north-east, French settlements in the south, and Spanish settlements in the south-west, has taken directly from the native Indians the immense central territory which these settlements nearly encompassed. The Indian tribes still number at least 322,000 souls; and a large proportion of them occupy the reserve called "Indian Country," on Arkansas River, where, notwithstanding the adoption of Protestant Christianity, they live according to their several customs. Immigration from the British Isles and from the north-west of Europe goes on at the rate of about half a million a year; but all the European races amalgamate, and the grand distinction in the United States is that between the white man and the black. The immigration of Chinese has been stopped by Congress; but they are found, chiefly on the Pacific coast, to the number of about 200,000. The English language may be said to be that of the United States. Protestantism prevails, Methodists, Baptists, and Presbyterians being the pre-

ponderant denominations. Mormons are conspicuous only in Utah. The President of the Republic is elected by the people, with the intervention of an electoral college, every four years; and Congress consists of a Senate and a House of Representatives. The representatives of territories may speak in the house, but do not vote. Each State has its own local legislature. Education is one of the matters under the control of each State; and very amply is it provided for by them all. The seat of Congress is **Washington,** in the Federal district of Columbia, a small slice cut out of Maryland, along the Potomac. It is a city of broad, straight, parallel streets, and of magnificent public buildings, at the head of which stands the Capitol, in which Congress meets. The President resides in White House. But the business capital of the United States is New York, or rather New York along with Brooklyn on Long Island, and Jersey City, which together contain a population of nearly 2,000,000. New York itself is built chiefly on islands, of which Manhattan is the largest, at the mouth of Hudson River. Broadway, its principal business street, is three miles long.

The detached territory of Alaska, with the Aleutian Islands, was purchased from Russia in 1867. It is mountainous, with great intervening plains. Yukon, its principal river, rises in British territory, and, after a course of 2000 miles, enters Behring Sea by several arms, forming a delta. Its highest mountain is in the narrow coast-land which is its southward continuation, Mount Fairweather, 14,750 feet. Mount St Elias, 14,970 feet, is a boundary-stone, as it were, in the frontier of Alaska with British territory. The population consists mainly of Indians and Eskimo. The fur of seals and sea otters is the chief produce. It may help the reader to measure areas in the United States, if he reflect that Alaska alone contains more square miles than the British Isles, France, Spain, and Portugal all together.

EXERCISES.

How are the United States bounded? What is their extent in square miles? What is their population? How many million of negroes? Which are the North-Eastern States? Name their chief towns. Which are the Middle States? Name their chief towns. Which are the Southern States? Name their chief towns. Which are the North-Western States? Name their chief towns. Which are the Mid-Western States? Name their chief towns. Name the territories not yet erected into states? Name their chief towns. Name the islands, bays, capes, mountains, lakes, and rivers.

Between what degrees of latitude and longitude does the country lie? Give its length and breadth. What four natural divisions account for almost the whole of it?

Describe the Atlantic slope. How far are the Alleghany Mountains from the shore? Describe them. How high, and where are their highest summits? What three rivers reach the Atlantic through gaps in them? Into what three regions is the Missouri-Mississippi basin naturally divided? Compare these two rivers at their confluence.

Give an account of the Mississippi branch. Describe the Upper Missouri. Where are the falls which interrupt navigation on the Missouri and Mississippi respectively? Name the principal tributaries to the united stream. What of its lowest reaches? What place does the Missouri-Mississippi hold among the rivers of the world?

Give the elevation and the breadth of the table-land region? By what mountains is it buttressed? Where, and of what nature is Fremont's Basin? By what rivers are the table-lands N. and S. of Fremont's Basin drained respectively? What are *cañons*, and where is the grandest example? What State contains the highest mountains? Where is the National Park? Mention some of its wonders. Account for the name Two-Ocean Pass. Contrast the eastern and western approaches to the table-land region. Name the two famous valleys of California.

What region in the United States has the finest climate? What is the fault of the climate everywhere else? Account for the arctic cold reaching far south. Give illustrations. What grain prevails? What is the produce of the Southern States? Which is the wheat state? Where is irrigation needed for successful tillage? Where are coal and iron, copper, silver, and gold mined respectively? What three places on the Pacific are termini of railways from the Atlantic? Name the chief exports to and imports from Britain.

What old European settlements form part of the United States? About how many of the native Indians remain? Give an account of the "Indian Country." At what rate is immigration from Europe going on? What is the grand distinction in the population? What of the Chinese immigrants? What language and what forms of Christianity prevail? Of what nature is the Government? How is education managed? Give some account of the capital. Distinguish between the Capitol and the White House. Give some account of New York. What two cities unite with it in forming a population of nearly 2,000,000.

How and when was Alaska acquired? Give an account of its largest river and highest mountain. What mountain stands in the line of its boundary with British territory? What of its population, temperature, and produce? Show, by comparison, its enormous extent.

MEXICO

Is bounded N. by the United States; W. by the Pacific Ocean; S. by the Pacific Ocean, Guatemala, and British Honduras; E. by the Gulf of Mexico and the United States. The area is 743,000 square miles, and the population 9,276,000.

REMARKS.

Mexico extends from 15° 45′ to 32° 45′ N. lat., and from 87° to 117° W. long. Its greatest length is about 1800 miles; its breadth varies from 130 to 1300 miles.

Mexico is, for the most part, a table-land from 6000 to 8000 feet above the sea. Continuations of the Rocky Mountains overspread it. the central range, which is rich in minerals, being called Sierra Madre; and a line of volcanic peaks, including the highest summit in Mexico, Popocatepetl, *i.e.*, Smoking Mountain, 17,783 feet above

the ocean-level, crosses it at about 19° N. lat. The higher peaks are covered with perpetual snow. The seasons are divided into the rainy and the dry, the former beginning about the middle of May, and lasting four months. The traveller, in ascending from Vera Cruz to Mexico City, passes, as it were, from the torrid to a temperate zone, and by climbing a mountain he would reach a frigid one. In the interior, vegetation dies down during the dry season wherever the land is not irrigated. The coast-lands, extending 20 to 30 miles inland, are unhealthy, excepting Yucatan, of which, though low and peninsular, both the air and the surface are remarkably dry.

Half the population consists of pure Indians, of whom a large proportion are unsettled and predatory: the other half consists mainly of mixed breeds, pure Spaniards, or other whites, and pure negroes being comparatively few. Spanish is the language of all the settled communities. With splendid soil and climate, and mines inexhaustible, with the aid of railways too and telegraphs, Mexico makes but a moderate contribution to the world's wealth. There is no middle class, and the masses are unschooled, unambitious, and indolent. The Mexican railway companies are got up in the United States of North America, and most of the trade is in the hands of foreigners, especially of Germans. After silver, the chief exports are copper, cochineal, drugs, hides, and mahogany; manufactured articles are imported, chiefly woven stuffs. Mexico is a federal republic, consisting of 27 states, one territory, viz., the mountainous and barren ridge of Lower California, and one federal district containing the capital; it has a President and Congress of two houses, like the United States of North America. Mexico City, 7000 feet above the ocean-level, and nearly equi-distant from the Atlantic and the Pacific, resembles Turin by the spaciousness and regularity of its streets, and by the grandeur of the surrounding scenery. The cathedral, in respect of architecture and internal decoration, claims to be the most splendid church in America. Roman Catholic Christianity is universally professed, but there is no connexion between church and state. The present government repudiates its whole foreign debt, and pays no interest on the internal debt which it acknowledges.

EXERCISES.

How is Mexico bounded? What is its area in square miles? What is its population? Between what degrees of latitude and longitude is it situated? What are its length and breadth? Describe the table-land. What about Popocatepetl? How are the two seasons distinguished? How can a traveller get from one extreme of temperature to another? Where are the unhealthy districts? What of Yucatan?

What three races go to form the population, and how? What is stated of the middle class and of the masses? Who get up Mexican railway companies? Who carry on the trade? Name the chief exports and imports. Of what nature is the government? In what respects does Mexico City resemble Turin? What of its cathedral? What is the language, and what the religion of Mexico? How does it stand financially?

CENTRAL AMERICA.

CENTRAL AMERICA is not a political unity, it is merely a convenient collective name for the following countries situated immediately south of Mexico :—

Countries.	Chief Towns.
British Honduras	Balize.
Five Independent Republics—	
Guatemala	New Guatemala.
Honduras	Tegucigalpa.
San Salvador	San Salvador.
Nicaragua	Managua, Leon, Granada.
Costa Rica	San José.
Isthmus of Panama, belonging to the United States of Colombia.	

British Honduras yields mahogany and logwood. The territory of the five independent republics is another Mexico, only the area is less, the table-lands and the mountains lower. The highest summit of Central America, Volcan de Agua, near New Guatemala, is nearly 14,500 feet high. There is the same liability to earthquakes as in Mexico, and the year is divided between the same two seasons, only that the rainy season is longer in the south, where indeed the Atlantic coast, moister all along than that of the Pacific, can hardly be said to have a dry season at all. Vegetation and produce are similar to those of Mexico. So, in respect of race and language, character and religion, is the population.

THE WEST INDIA ISLANDS

EXTEND in a curved line from Florida in N. America to the Orinoco in S. America, so shutting in from the main Atlantic the Gulf of Mexico and the Caribbean Sea. They are nearly a thousand in number. Their area is about 95,000 square miles, and their population about 4,316,000.

The political relations of the islands are these :—

Independent—	Chief Towns.
Dominican Republic	San Domingo.
Hayti	Port au Prince.

British—	Chief Towns.
Bahamas............................	Nassau in Providence Island.
Jamaica and Dependencies......	Kingston.
Leeward Islands....................	St John's in Antigua.
Windward Islands.................	Bridgetown in Barbadoes.
Trinidad......	Spanish Port.
French—	
Sundry Lesser Antilles...	Basse-terre in Guadeloupe.
Spanish—	
Cuba................................	Havannah.
Porto Rico.........................	San Juan.
Danish—	
Three of the Virgin Isles......	Charlotte Amalie in St Thomas.
Dutch—	
Sundry Islands....................	Willemstad in Curaçao.

REMARKS.

The West India Islands were so called in the belief that land reached by continuous sailing westward must belong to India. They are generally mountainous, granite ranges traversing the Greater Antilles in the direction of their length; and the Lesser Antilles, which are comparatively recent volcanic formations, abounding in *soufrières, i.e.*, expiring volcanoes, which emit sulphurous vapours. The coasts are for the most part high and rugged; where low, they are wooded. Swamps and coral reefs keep vessels at a distance. There are two rainy seasons. About the middle of May the earlier begins, rain falling every day at noon for about a fortnight. The weather then becomes dry, clear, and settled, a sea-breeze springing up about two hours before noon. During this season the nights are splendid; the smallest print may be read by moonlight, and the planet Venus is brilliant enough to cast a shadow. From August to October, the islands are liable to hurricanes. After October, which is the latter rainy season, the weather becomes serene, and the temperature remains comparatively cool till the earlier rainy season recurs. The climate, though warm and moist, is healthy, except in the lower grounds. The vegetation is luxuriant; sugar, coffee, and tobacco are the staples of produce. Slavery exists only in Cuba, but will cease there, according to present arrangements, in 1890. Chinese labourers and Indian coolies have been imported into some of the islands; but negroes form the bulk of the population, following the religion and speaking the language of whatever European nation may be, or may have been, dominant in each island.

San Domingo.—This island, not quite as large as Scotland, contains two negro republics, viz., the Dominican Republic, occupying the eastern two-thirds of the island, which was formerly Spanish;

and the Republic of Hayti, in the western third, which was formerly French. The former is a Federal Republic, consisting of five states, each with a local legislature, but all united under a President and a Congress of two houses, as in the U.S. of N. America. The Dominican Republic contains the only considerable plains, and the highest mountains, culminating in Cibao, 7200 feet.

Spanish.—*Cuba*, nearly as large as England without Wales, is the largest and finest of the West Indian Islands. Immense savannahs stretch away to the base of mountains, which, in the Sierra del Cobre at the S.E. end, rise to a height of 7200 feet. Several hundred miles of railway help to develop the resources of the island. Of the many islets along the coast, the Isle of Pines is the most considerable.

Porto Rico, a minor Cuba, except that coffee is much more grown, and tobacco much less. In both Porto Rico and Cuba whites form a majority of the population.

British.—*Bahamas*, about 500, of which only some 20 are inhabited. Fruit, as pine-apples and oranges, is the chief export.

Jamaica, the largest of the British islands, and one of the least prosperous, from a want of co-operation between the white proprietors of estates and the blacks, who could make them productive. The Blue Mountains attain a height of 8184 feet. Dependencies of Jamaica are the Caymans, W. of it; the Caicos and Turks, the southernmost of the Bahamas.

Leeward Islands.—These are Antigua, Montserrat, St Christopher, Nevis, and Dominica, and the Virgin Isles, excepting the three which are Danish.

Windward Islands.—These are Barbadoes, St Vincent, Grenada, Tobago, and St Lucia.

Trinidad.—The second largest of the British West Indian Islands, contains a lake of asphalt, and mud volcanoes.

French.—These are Martinique; Guadeloupe with Désirade, Marie-Galante, and Les Saintes; St Bartholomew; part of St Martin —all belonging to the Lesser Antilles.

Danish.—Three of the Virgin Isles, viz., St Thomas, St John, and Santa Cruz. The first is an important mail-packet station. In them all, English is much spoken.

Dutch.—These are St Eustatius, Saba, and part of St Martin in the Lesser Antilles; Curaçao, Oruba, and Buen Ayre on the coast of Venezuela. English is the language of the whole of St Martin.

EXERCISES.

Explain the statement that Central America is not a political unity. Name the five independent republics in it. What district in it belongs politically to a South American state? In what respects does the territory of the five independent republics resemble Mexico? What and where is the highest mountain? In what respects do the inhabi-

tants of the five independent republics resemble the Mexicans? For what is British Honduras valuable?

Describe the position of the West India Islands. Name the two independent republics, and the capital of each. Name the five British groups. What and where is the capital of the French Antilles, and of the Danish Virgin Isles respectively? Which are the two Spanish islands, and what are their respective capitals? What and where is the capital of the Dutch islands?

How did the West Indies receive their name? What of the mountains in the Greater Antilles? What are *soufrières* in the Lesser Antilles? What of the coasts? In what months are the two rainy seasons? Describe the weather, and especially the nights, in the intervening months. What are the three chief items of produce? In what one island does slavery still exist? From what countries is labour imported? What about the language and religion of the negroes?

In what proportions is the island of San Domingo divided between the two negro republics? Which one was previously Spanish, and which one French? Which of them is modelled on the U.S. of North America? Give the name and height of the highest mountain in San Domingo. Give some notion of the size and importance of Cuba. Give the name and height of its highest mountain. Where is the Isle of Pines? In what respects does Porto Rico differ from Cuba? What about the population of the Spanish West Indies? Give an account of the Bahamas. Which is the largest of the British West Indies? Name and give the height of its principal range of mountains. Why is it little prosperous? Name its three dependent groups, and point them out. What islands form the Leeward group? What European power shares the Virgin Isles with the British? What islands form the Windward group? For what is Trinidad remarkable? Name the French West India Islands. To what group do they all belong? Which one is shared between the French and the Dutch? Which three of the Virgin Isles are Danish? Which one of them is an important mail-packet station? What do the Dutch possess in the Lesser Antilles? What islands have they on the coast of Venezuela? What is the language spoken in St Martin?

THE UNITED STATES OF COLOMBIA

ARE bounded W. by Costa Rica and the Pacific Ocean; N. by the Caribbean Sea and Venezuela; E. by Venezuela; S. by Brazil, Ecuador, and the Pacific Ocean. The area is about 321,000 square miles, and the population about 3,000,000.

Chief Towns.—SANTA FÉ DE BOGOTA, Popayan, Panama, Cartagena, Socorro, Aspinwall.

REMARKS.

The United States of Colombia extend from 0° 36′ S. lat. to 12° 25′ N. lat., and from 69° 14′ to 83° W. long. Their length,

from north to south, is about 1000 miles; their greatest breadth, from east to west, is about 1050 miles.

The Andes trifurcate here. The western Cordillera is the highest, and contains the highest mountain in Colombia, the volcano of Tolima, 18,270 feet, 4° 46′ N. lat.: the highest mountains in the eastern Cordillera are volcanoes about 15,000 feet high. The central Cordillera is the watershed between the valley of the Magdalena and that of its great tributary, the Cauca. After a course of 1000 miles, throughout half of which it is navigable, the Magdalena forms a large delta in the Caribbean Sea. The coast-land and the lower half of the Magdalena and Cauca valleys are tropical; the upper half is temperate. Around **Bogota,** the capital, situated 8000 feet above the ocean-level, there reigns perpetual spring; and in this temperate region most of the population is settled. Immediately east of the delta is a rather isolated mountain-group called Sierra de Santa Marta, 17,000 feet high. The low isthmus of Panama is crossed by a railway, of which the termini are Aspinwall on the Atlantic, and Panama on the Pacific; and it is being pierced with a canal running nearly parallel to the railway. That large portion of Colombia which lies east of the eastern Cordillera belongs to the *llanos* of the Orinoco described under Venezuela. One-half of the inhabitants of Colombia are whites, pure or nearly so. All speak Spanish, and profess the Roman Catholic religion; but other forms of worship are tolerated. Schools are fairly well organized. The number of states united into a Federal Republic is nine.

EXERCISES.

What are the boundaries of Colombia? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Compare the eastern Cordillera with the western. How is the central Cordillera related to the main river-system? Where is there a lofty isolated mountain-group? What of the climate? Point out the termini of the Panama railway and canal. With what country does Colombia share the *llanos* of the Orinoco? What proportion do whites bear to the whole population? What of language and religion in Colombia? How many states have united in the Federal Republic so called?

REPUBLIC OF VENEZUELA

Is bounded W. by the United States of Colombia; N. by the Caribbean Sea; E. by British Guiana; S. by Brazil. Its area is 403,000 square miles, and its population 2,000,000.

Chief Towns.—CARACCAS, Valencia, Barquisimeto, Merida, Maracaibo, Truxillo.

REMARKS.

Venezuela extends from 1° 10′ to 12° 10′ N. lat., and from 60° to 73° W. long. Its length, from east to west, is about 900 miles; its breadth, from north to south, about 800 miles.

The outlying portion around Lake Maracaibo apart, Venezuelan territory is just the basin of the Orinoco, minus what of it belongs to Colombia. The Orinoco basin is a saucer with a single break in its mountain-rim, through which the Orinoco reaches the Atlantic by about fifty mouths, of which only seven are navigable at all, and only one is navigable by large ships. It winds for 1500 miles over a straight-line distance of only 900 miles. The cataracts of Atures, about the middle of its course, stop navigation. Almost the whole year is occupied by the rise and fall of its waters, which are at their height in September, causing an inundation nearly a hundred miles wide, along six hundred miles of river. The extent of this inundation, and the clouds of stinging insects which succeed it, prevent settlement on the banks. The *llanos*, *i.e.*, plains on either side of the Orinoco, are flats of scantily-wooded grass-land, without the smallest pebble for hundreds of miles. Cattle and horses multiply here. The Parima Mountains on the Brazilian frontier are forest-clad. Immediately west of them occurs a depression in the Venezuelan rim, at which the Orinoco, already two-thirds of a mile broad, sends off a stream which, by the Cassiquiari and Rio Negro, reaches the Amazon. The mountains separating the Orinoco basin from Lake Maracaibo, 15,022 feet high, are the highest of all, and snow-clad, as the name Sierra Nevada implies. Lake Maracaibo is a sea-gulf, with numerous native villages built on piles in the water, like the pre-historic lake-dwellings of Switzerland. The climate is hot and unhealthy in the low grounds. The capital, **Caraccas**, stands 3000 feet above the ocean-level, and most of the population is settled in the same part of the Caribbean coast. The population is a mixture of Spanish, Indian, and negro blood. Language, Spanish; religion, Roman Catholic; government, a Federal Republic of eight large states, one colony, five territories, and one Federal district. Church and state are united, the government presentation to livings being subject to confirmation by the Pope; but all forms of worship are tolerated.

The Venezuelan islands of Margarita, Tortuga, and Los Siete Hermanos are similar to the Dutch West India Islands, on the same coast; but they are never included under the name of West Indies.

EXERCISES.

What are the boundaries of Venezuela? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Of what two portions does Venezuelan territory consist? Why is the Orinoco basin called a saucer? Describe the Orinoco delta. What fact shows that the Orinoco is a very winding river? How far

up is it navigable? What of its annual rise and fall? What prevents settlement on its banks? Describe the *llanos.* Where and how does the Orinoco communicate with the Amazon? Where are the highest mountains in all Venezuela? How are the natives housed on Lake Maracaibo? Where is most of the population settled? What three races are mixed in it? What of language and religion in Venezuela? How many states and territories are there, besides the Federal District? Name three islands on the Caribbean coast. Point out the three Dutch West India Islands on the same coast.

REPUBLIC OF ECUADOR

Is bounded N. by the United States of Colombia; W. by the Pacific Ocean; S. by Peru; E. by Brazil. Its area is 248,000 square miles, and its population 1,000,000.

Chief Towns.—QUITO, Guayaquil, Cuença, Riobamba.

REMARKS.

Ecuador, so called from its capital standing almost on the equator, extends from 1° 50′ N. lat. to 4° 50′ S. lat., and from 70° to 81° W. long. Its length, from east to west, is about 800 miles; its breadth, from north to south, about 600 miles.

Ecuador consists of coast-plains, the Andean plateau, and the eastern plains which slope to the left bank of the upper Amazon. The plains, both maritime and inland, are hot, moist, and unhealthy. The Andean plateau, lying 10,000 feet above the ocean-level, between two nearly parallel Cordilleras, is highly salubrious, and contains most of the population. The highest mountain in Ecuador is Chimborazo, 20,517 feet, a perfect dome in the western Cordillera; the most conspicuous in the eastern Cordilleras is the active volcano, Cotopaxi, a perfect truncated cone, 19,500 feet. **Quito**, the capital, enjoys perpetual spring; and its inhabitants can reach perpetual frost by a four hours' climb up the at present dormant volcano of Pichincha, on the flank of which it is built. The population is pretty equally divided between whites, pure and mixed with Indian blood, and pure Indians. Language, Spanish; religion, Roman Catholic. Political convicts are banished to the Galapagos Islands, a group abounding in birds, sea-turtle, and fish.

EXERCISES.

What are the boundaries of Ecuador? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Of what three portions does Ecuador consist? Which two of them are unhealthy? Describe the table-land. Compare Chimborazo and Cotopaxi. Describe the situation and climate of the capital. What races are mingled in the population? What of language and religion in Ecuador? To what use are the Galapagos Islands put?

REPUBLIC OF PERU

Is bounded N. by Ecuador; W. by the Pacific Ocean; S. by Chili; E. by Bolivia and Brazil. Its area is 486,840 square miles, and its population is 2,657,000.

Chief Towns.—LIMA, Cuzco, Arequipa, Callao.

REMARKS.

Peru extends from 3° 30′ to 22° S. lat., and from 68° to 83° W. long. Its length, from south-east to north-west, is about 1400 miles; its extreme breadth, from east to west, about 700 miles.

The Andes, with their lofty valleys and table-lands, separate the coast-land from the inland forest-region, which slopes along the Ucayali and other tributaries of the Amazon. The longest of the Andean valleys is that of the infant Amazon itself, which, under the name Marañon, issues from Lake Lauricocha, on the N. side of the Knot of Pasco, at an elevation of 12,000 feet. Before leaving Peru, the infant river can float the largest ships. The highest mountains are still in the western Cordillera, viz., the Sajama group in the south, rising to the height of 23,010 feet, and containing the highest active volcano in the world, Gualateïri, 21,960 feet. The coast-land, about 60 miles in breadth, is barren from drought, and cool because of a cold marine current from the south. The climate on the slope of the western Cordillera is marked by strange alternations. From May to October a thick mist, which merely diminishes the sun's heat upon the coast-land, moistens the Andean slope at a height of 1500 to 2000 feet; and the consequence is a pretty luxuriant growth of sugar-cane, sweet potato, and the like at that elevation. Immediately above that comes a rainless region, which is succeeded at a height of 7000 by a second rainy one, where European cereals and fruits are grown. Peru produces many drugs, including cinchona, known as Peruvian bark; and its highlands are the native country of the llama. Its main wealth, however, consists in deposits of guano, which, exhausted now on the Chincha Islands, are still found at various points along the coast; in beds of nitrate of sodium in the south; and in silver-mines, high up among the Andes, particularly those of Cerro de Pasco, 14,275 feet above the ocean-level, where there is also good coal, almost a necessary against the cold and boisterous weather of that elevation. The two principal lines of railway are triumphs of engineering skill. One of them, from the port of Mollendo to Puno on Lake Titicaca, is carried over the western Cordillera at the height of 15,700 feet above the ocean-level; and the other, from the port of Callao *via* **Lima** to Oroya, on the Andean plateau, is carried through a tunnel at nearly the same elevation. The majority of the population is pure

Indian, and the native language maintains itself alongside of Spanish. The charter of 1867 prohibits any other public worship than the Roman Catholic.

EXERCISES.

What are the boundaries of Peru? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Of what three portions does Peru consist? Describe the river in the longest of the Andean valleys. What of the Sajama group of mountains? Describe the succession of rainless and rainy regions from the coast up the western Cordillera. Mention one characteristic drug and one indigenous animal. In what does the wealth of Peru mainly consist? Where are the most productive silver-mines? Name the termini of the two trans-Andean railways. What of race, language, and religion in Peru?

REPUBLIC OF BOLIVIA

Is bounded W. by Peru and Chili; N. by Brazil; E. by Brazil and Paraguay; and S. by the Argentine Republic. Its area is estimated at 473,000 square miles, and its population at 2,300,000.

Chief Towns.—La Paz, Sucre, Cochabamba, Potosi.

REMARKS.

Bolivia, or Upper Peru, extends from 10° to 22° S. lat., and from 58° to 68° W. long. Its greatest length, from north to south, is about 1100 miles; its greatest breadth, from east to west, about 800 miles.

Now that Bolivia has lost to Chili what little seaboard it had, Bolivian territory consists mainly of the Andean table-lands and of the inland slope along the upper tributaries to the Madeira. The vast forests and grazing lands of this inland region are undeveloped. The western Cordillera in Bolivia is single: the eastern is manifold, forming many basins and valleys, and sending out many spurs, between which rise tributaries to the Madeira. The largest of the table-lands is that which contains Lake Titicaca at one end and Lake Poopo, 160 miles off, at the other; Lake Poopo receiving the outflow of Lake Titicaca by Desaguadero River, but neither lake communicating with the ocean. Lake Titicaca, fourteen times as large as the Lake of Geneva, lies 12,545 feet above the ocean-level, and is commanded by Sorata, 24,806 feet, the highest mountain in all America. At the elevation of Lake Titicaca the cereals and fruits of Europe are grown. The main wealth of the country consists in the precious metals, especially the silver of Oruro and Potosi, places situated nearly as high as Cerro

de Pasco in Peru, and suffering the same inclement weather. Communication with the world is obtained through Peru. About half the population are mestizoes, *i.e.*, of mixed white and Indian blood; and the pure Indians greatly outnumber the pure whites. Language, Spanish; religion, Roman Catholic, other worship being contrary to law; schooling neglected. The political condition of Bolivia is so unsettled that its capital cannot be named: the dominant party for the time being makes this or that town the capital, to suit its own convenience.

EXERCISES.

What are the boundaries of Bolivia? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Of what two portions does Bolivia consist? Wherein does the eastern Cordillera differ from the western? Of what nature is the country on the upper tributaries of the Madeira? What is remarkable about the largest table-land? Find out whether Sorata is in the eastern or in the western Cordillera. Where are the most productive silver-mines, and in what kind of country? How does Bolivia communicate with the world? What of race, language, religion, and schooling in Bolivia? Why is its capital not named?

REPUBLIC OF CHILI

Is bounded W. by the Pacific Ocean; N. by Peru; E. by the Argentine Republic; and S. by the Antarctic Ocean. Its area is 250,000 square miles, and its population 2,300,000.

Chief Towns.—SANTIAGO, Valparaiso, Concepcion, Copiapo.

REMARKS.

Chili extends from 21° 30′ to 56° S. lat., and from 68° 40′ to 76° W. long. Its length, from north to south, is about 2300 miles; and its breadth about 100 miles.

Within the above-mentioned limits of latitude, Chili possesses all that lies between the crest of the eastern Cordillera and the Pacific; and where the Cordillera sinks into the plain southward, the boundary with the Argentine Republic is continued in a straight line to Cape Virgin, so that the whole continental coast along Magellan Strait belongs to Chili. The island of Tierra del Fuego, *i.e.*, Land of Fire, so called from its volcanoes, is divided between Chili and the Argentine Republic. The Chilian Andes include sixteen active volcanoes, and culminate behind Valparaiso in Aconcagua, 22,415 feet. Down to about 30° S. lat. the Chilian coast is rainless, containing there the desert of Atacama, which is rich in nitrate of sodium and guano, the silver-mines of Copiapo, and the great copper-mining district from Copiapo to Coquimbo. From

about the 30th parallel southwards, rain falls and irrigation ceases to be needed about 35° S. lat., where begins a fine wheat country. Then forests succeed, covering also the island of Chiloe, which is fully ten times the size of Anglesey. Farther south, the antarctic continent or islands make their neighbourhood felt, and at 46° 30′ S. lat. coast-glaciers begin. The copper-mines are the chief source of wealth. The Chilians speak Spanish, are indeed Spaniards with some admixture of Indian blood. About 20,000 of the Araucanians, the manliest of all the American Indian tribes, still maintain a sort of independence in an inland territory south of the River Biobio. Chili is the most stable, the best schooled, and the most prosperous of all the American republics which were once dependencies of Spain. The roads have been greatly improved of late, and about 1000 miles of railway are open. Roman Catholicism is the religion of the state, but other forms of worship are tolerated. On the island of Juan Fernandez, far out from Valparaiso, port of the capital **Santiago**, Alexander Selkirk, whose adventures have been amplified into those of Robinson Crusoe, spent four years, 1704-1708.

EXERCISES.

What are the boundaries of Chili? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Trace the boundary-line towards the Argentine Republic. Give an account of the Chilian Andes. What makes the Atacama desert valuable? Where are the chief mines of copper and silver? How does the climate change about the 30th parallel? Where are the wheat-lands? Where are the forests? In what latitude do glaciers begin to appear on the coast? What of race, language, and religion in Chili? Where and who are the Araucanians? What of the islands Juan Fernandez, Chiloe, and Tierra del Fuego?

THE ARGENTINE REPUBLIC

Is bounded N. by Bolivia; W. by Chili; S. by the Antarctic Ocean; and E. by the Atlantic, Uruguay, Brazil, and Paraguay. Its area is about 1,358,000 square miles, and its population 2,500,000.

Chief Towns.—BUENOS AYRES, Cordova, San Juan, Mendoza, Tucuman, Salta, Rosario, Santa Fé, Corrientes, Catamarca.

REMARKS.

The Argentine Republic extends from 22° to 56° S. lat., and from 54° to 72° W. long. Its greatest length, from north to south, is about 2350 miles; its greatest breadth, from east to west, about 900 miles.

Since 1879, the Pilcomayo, a tributary to the Paraguay, has been the north-eastern boundary of Argentina, as this country is coming to be called, with Bolivia. El Gran Chaco, *i.e.*, the Great Hunting-ground, part of which has thus become Argentine, is a region well wooded with tall candelabra-like cactuses, and well adapted for tillage. The north-western corner is a lofty, sterile continuation of the Bolivian plateau. Southwards, between 26° to 27° 30′ S. lat., rises, entirely unconnected with the Andes, the Sierra de Aconquija, with summits of 17,000 feet. On the east side this sierra sends off well-wooded spurs in the direction of the fertile plain watered by the Rio Dulce, which, like most of the streams in this quarter, flows in the direction of the Parana, but does not reach it. From the western and steeper side barren plains stretch away to the Andes. The highest mountains of all within Argentine boundaries are farther south, the Sierra Famatina, an Andean offshoot, culminating in a snow-clad summit 19,760 feet high. Of other sierras, unconnected with the Andes, the most central is that of Cordoba, 7500 feet, southwards from which, as far as the Rio Colorado, stretch the *pampas*, a treeless level of rich pasture, interrupted by forests of thistle and salt marshes. Barrenness prevails in Chilian Patagonia, the surface in the north being of loose sand, and in the south intractably hard, even if the climate did not forbid cultivation. The Argentine Mesopotamia, as the country between the rivers Parana and Uruguay is called, is traversed by low hills in the direction of its length. The Parana has a very slight fall, being only 200 feet above the ocean-level at Corrientes, which is about 400 miles up country in a straight line. Its navigation is difficult, because of the continual formation of new shallows; and in its estuary, called Rio de la Plata, submarine banks keep large ships at a distance. Animal products are the chief exports: manufactured goods, coal, and iron the chief imports. About 1500 miles of railway are open. Spanish is the language. The bulk of the population is mixed of white, Indian, and negro blood, the number of pure whites being maintained by immigration, chiefly from Spain and Italy. Roman Catholicism is the religion of the state, but freedom of worship is secured by law. The republic is federal, consisting of fourteen settled provinces, and five territories in course of settlement. The only large town is the capital, **Buenos Ayres**, a city of straight-lined streets. For the reason already mentioned, large ships come no nearer than eight or nine miles; but a harbour is being constructed at Ensenada, 20 miles lower down the Rio de la Plata.

EXERCISES.

What are the boundaries of Argentina? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? What river is the north-eastern boundary?

Contrast the north-eastern corner with the north-western? What sierra is the highest range unconnected with the Andes? Contrast the eastern side of it with the western. What becomes of the Rio Dulce? What sierra is the highest of all in Argentina? Which one is the most central? Where and what are the *pampas?* Describe Chilian Patagonia. Give an account of Argentine Mesopotamia. State a fact showing how gradually the country rises along the Parana. What impedes navigation in the Parana and in the Rio de la Plata respectively? Mention the chief exports and imports. What of railway enterprise? What of race, language, and religion in Argentina? From what European countries do most immigrants come? How many provinces and territories go to make up the federal republic? What of the capital, and of its port?

REPUBLIC OF PARAGUAY

Is bounded W. by the Argentine Republic and Bolivia; N. by Brazil; E. by Brazil and the Argentine Republic; and S. by the Argentine Republic. Its area is about 92,000 square miles, and its population about 300,000.

Chief Towns.—ASUNCION, Concepcion.

REMARKS.

Paraguay extends from 22° to 27° S. lat., and from 57° to 60° W. long. Its length from N. to S. is about 400 miles, and its greatest breadth about 350 miles. The River Paraguay, which forms the frontier on the west, is navigable along the whole of that frontier; and the Parana, which forms the greater part of the eastern frontier, is also, but to a less extent, navigable. The region between these rivers, and partly traversed by the latter in the south, what may be called the Paraguayan Mesopotamia, is a region of hills and valleys, the highest hills, 2000 feet, being in the north, marshy plains in the extreme south. The triangular district within the rivers Paraguay and Pilcomayo and the 22nd parallel is a great plain, on which grass-lands and forests alternate. This whole district and most of the territory along the Parana is inhabited by native tribes. Civilisation is confined to the left bank of the Paraguay. The so-called whites are Spanish only on the male side, and the mass of the population is Indian. Spanish is the official language, but native Guarani is more generally spoken. The climate is temperate for the latitude and low level of the country. Rice succeeds in the marshy tracts of the south, but maize is the principal grain. The most valuable product commercially is the *yerba maté,* the leaf of a bushy evergreen akin to the holly, which is the tea of Paraguay and the neighbouring states. The religion is Roman Catholic, but the constitution guarantees liberty of worship.

EXERCISES.

What are the boundaries of Paraguay? What is its area? Its population? Name the chief towns, and point them out. Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? How far are the rivers Paraguay and Parana frontier rivers? How far are they respectively navigable? What is meant by Paraguayan Mesopotamia? Contrast the north of it with the south. What of the triangular district between the rivers Paraguay and Pilcomayo? Which is the principal grain? Where is rice cultivated? What is the *yerba maté?* To what district is civilisation confined? What of race, language, and religion in Paraguay?

ORIENTAL REPUBLIC OF THE URUGUAY

Is bounded W. by the Argentine Republic; N. by Brazil; E. by the Atlantic; and S. by the Rio de la Plata. Its area is 73,538 square miles, and its population 450,000.

Chief Towns.—MONTEVIDEO, Salto, Santa Rosa.

REMARKS.

Uruguay extends from 30° to 35° S. lat., and from 53° 25′ to 57° 42′ W. long. Its length from N. to S. is about 360 miles; its breadth from E. to W. about 330 miles.

The River Uruguay, which forms the frontier on the west, is navigable, except between Salto and Santa Rosa, where there are about 100 miles of rapids, now turned by a railway. The country may be described as undulating grass-land, with the climate of southern Europe; herds of oxen are its main wealth, and animal products, as Paysandu ox-tongues, so-called from a place on the Uruguay, its chief exports. There are no pure Indians remaining. The rural population consists chiefly of Gauchos, a violent race of mixed Spanish and Indian blood: the town population is largely recruited by immigrants from Europe, especially Basques from Spain, and Italians. Spanish is the language, and the religion is Roman Catholic, but freedom of worship is secured by law. The capital, **Montevideo**, is the chief port on the Rio de la Plata.

EXERCISES.

What are the boundaries of Uruguay? What is its area? Its population? Name its chief towns, and point them out? Between what limits of latitude and longitude does the country lie? What is its length? Its breadth? Between what towns is the navigation of the Uruguay interrupted by rapids? Describe the surface and climate. What are the chief products? Distinguish between the population of the country and that of the town. From what European countries do most of the immigrants come? What of language and religion in Uruguay? What advantage has the capital over all other places on the Rio de la Plata?

EMPIRE OF BRAZIL

Is bounded N. by the United States of Colombia, Venezuela, Guiana, and the Atlantic Ocean; E. by the Atlantic; S. by Uruguay; W. by the Argentine Republic, Paraguay, Bolivia, Peru, and Ecuador. Its area is 3,288,000 square miles, and its population 11,000,000.

Chief Towns.—RIO DE JANEIRO, Bahia, Pernambuco, Para, Maranham, San Paulo, Porto Alegre, Ouro Preto.

REMARKS.

The empire of Brazil extends from 33° 45′ S. lat. to 4° 30′ N. lat., and from 34° 45′ to 72° 30′ W. long. Its length, from east to west, is about 2600 miles; its breadth, from north to south, about 2450 miles.

In size, Brazil ranks with the largest empires of the world; it exceeds even the United States of North America, wanting the detached territory of Alaska. Its coast line contains no large indentations, but plenty of small inlets with good harbours. For a few degrees N. and S. of Rio de Janeiro, the shores are picturesque, showing rugged mountains: elsewhere they are low. The low and sandy coast of the extreme south contains the largest lake in the whole country, which discharges by a broad channel called Rio Grande. The surface of Brazil is pretty equally divided between the Amazonian basin and a mountainous table-land from which descend a multitude of rivers; the principal being the Francisco and Tocantins, which flow northward, and the Paranahyba, which flows southwards to the Parana. The navigation of Rio Francisco is interrupted by falls about 170 miles from its mouth; that of the Tocantins penetrates far into the interior by its Aruguay affluent, arms of which form an immense river island containing Lagoa Grande, the only large lake in the interior. The average height of the Brazilian mountains is under 2500 feet; and it is not certain that any of them reach 10,000 feet.

If the Mississippi, measured up the Missouri branch, is the longest river in the world, the Amazon is yet the largest. It discolours the sea 300 miles out from land; at the same distance up stream, its breadth varies from three to seven miles; and its two principal tributaries, the Madeira and the Rio Negro, are each as large as the Danube. It is navigable by large steamers throughout its course in Brazil, and with its tributaries offers 30,000 miles of navigable water, which is more than that of all the rivers of Europe together. Very low is the watershed between the Amazon and Orinoco basins in the north, and also between the Amazon and Paraguay basins in the south. Tributaries of the Paraguay, which is the great outlet for the southern interior of Brazil, rise only three miles from tribu-

taries of the Madeira; and a union canal could easily be cut, effecting by art what nature has itself effected on the watershed of the Amazon and Orinoco basins. There the Rio Negro is connected by the Cassiquiari with the Orinoco. The flood-season of the Amazon is from March to July, with a maximum rise of 40–50 feet, and an inundation so extensive that, through the accumulation of alluvial deposit, the inhabitants of immense tracts have never seen a stone. The Amazonian basin is a country of *Selvas* or wooded regions; palms, of which the variety is greater in Brazil than in any other country, prevailing on either bank of the main stream. The watershed of the Amazon and Orinoco basins bears the largest primeval forest in the world.

The temperature of Brazil is cool for an inter-tropical country. At the sources of Rio Francisco water has been found to freeze. In the southern provinces the climate is one of cool summers and mild winters. The mainstay of the people is mandioc meal, of which tapioca is a refined variety. Maize and rice are grown; also coffee and sugar, tobacco and cotton. Coffee and sugar are the chief exports. A large population is employed in mining, and one-fifth of all the gold and diamonds found belongs to Government.

By preserving in one block what were once the Portuguese possessions on the American mainland, Brazil contrasts with the many republics into which the erewhile Spanish possessions in America have been broken up. It enjoys stable government under a scion of the royal house of Portugal, styled Emperor, who is aided by a Senate and a House of Representatives. Railways and industrial undertakings have been promoted by Government guarantees; and, though the currency is irredeemable paper, the public credit is good. Slavery is in course of abolition. Three races meet in the population, the European, chiefly Portuguese, the Indian, and the negro; and the mass of the population is mixed. Pure negroes constitute one-fifth of the whole; pure Europeans are comparatively few. The state church is Roman Catholic; but religious toleration exists both by law and in the public sentiment. Since 1875, when it was ascertained that only about one-fourth of the free population could read, state-supported elementary schools have been established throughout the empire. There is a university in **Rio de Janeiro,** the capital, a City of Palaces. The most striking of its buildings, however, is the double tier of lofty arches which brings the principal aqueduct into the heart of the city. What with beautiful islands, and a background of precipitous mountains fantastically outlined, the Bay of Rio de Janeiro is preferred by many to the Bay of Naples.

EXERCISES.

How is Brazil bounded? What is its area? Its population? Name its chief towns. Between what degrees of latitude and longitude does it lie? What are its length and breadth?

Compare the area of Brazil with that of the United States of North

America. Describe its coast line generally. Describe that portion of it which lies immediately N. and S. of Rio de Janeiro. Name the three principal rivers of the mountainous table-land. Which of them is only a tributary? Where is the largest inland lake, and where the largest lake of all? What is the average height, and what the maximum height of the mountains?

Illustrate by facts the great size of the Amazon. Name its two principal tributaries. What of its navigable waters? What of the watershed between the Amazon and Paraguay basins? And of the watershed between the Amazon and Orinoco basins? At what season, and how high does the Amazon rise? How account for the absence of stones in the ground on both sides of the river? What and where are the *Selvas?* What tree prevails on either bank of the Amazon? Where is the largest primeval forest in the world?

What is said of the climate throughout Brazil, and particularly in its southern provinces? What sort of meal is the mainstay of the people? What two grains are largely grown? Name the two chief exports. From what sort of mines does the Government derive revenue?

In what respect does Brazil contrast with all the rest of South America that is independent? Of what nature is the Government? How does it promote railways and industrial undertakings? What of the currency and of slavery? What three races are mixed in the population? Which of them constitutes one-fifth of the whole? What of church and school in Brazil? Give some account of the capital, and of the bay on which it stands.

GUIANA

Is bounded N. by the Atlantic Ocean; E. and S. by Brazil; and W. by Brazil and Venezuela. Its area is about 178,000 square miles, and its population about 337,000.

Divisions.	Sq. miles.	Population.
British Guiana	85,000	255,000
Dutch Guiana	46,000	68,000
French Guiana	47,000	27,000

REMARKS.

Guiana is a merely geographical name. The country now so-called—for the name once covered a much wider area—extends from 0° 40′ to 9° N. lat., and from about 51° to 61° W. long. Its length, from east to west, is about 710 miles; its breadth from north to south about 560 miles.

Throughout Guiana, the coast for 10–50 miles inland is little, if at all, above the level of the Atlantic at high water; then succeed densely wooded hills and mountainous tracts. The highest mountains are in British Guiana, at the head-waters of the Essequibo, by far the largest river in all Guiana. There the table-topped Roraima shows a perpendicular wall of sandstone, about 7500 feet

high; and the River Potaro descends, in one leap of 741 feet, into a deep cañon, through which it finds its way to the Essequibo. Cultivation is confined to the coast-lands, which are extremely fertile, but require drainage and embankment against the sea, like the lands in the Netherlands called *polders*. Most of the coast-land sinks, on being drained, to a foot or more below high-water level, and thus becomes polder-land. The heat in Guiana is moderate for an intertropical country, and the climate is not unhealthy. Negroes and mulattos form the great majority of the population.

The Crown colony of British Guiana is divided into three districts named after the principal rivers—Essequibo, Demerara, and Berbice. The capital, **Georgetown**, is situated about a mile from the mouth of the Demerara. **Paramaribo**, the capital of Dutch Guiana, is on Surinam River, about ten miles from its mouth. **Cayenne**, the capital of French Guiana, and a penal settlement, is situated on a coast island. The sugar-cane takes precedence of all other crops in British and Dutch Guiana, cacao ranking next. In French Guiana, arnotto and cacao take the lead.

EXERCISES.

What are the boundaries of Guiana? What is its area? Its population? Among what three European powers is it divided? Which of these divisions is the largest? Between what degrees of latitude and longitude does Guiana lie? What are its length and breadth?

Describe the surface of Guiana from the shore inwards. Name the largest river. Describe the most remarkable mountain and waterfall. In what respect do the coast-lands resemble the Netherlands? What of the climate? Who form the majority of the population?

To what class of colonies does British Guiana belong? Into what three districts is it divided? Name the respective capitals of British, Dutch, and French Guiana. Where are they severally situated? Which of them is a penal settlement? Which two crops are the most important in British and Dutch Guiana? Which two are the most important in French Guiana?

FALKLAND ISLANDS

Are the only considerable group in the South Atlantic, and the most southerly of all the British possessions. In respect of surface, climate, and produce, they might be called the Shetlands of the Antipodes; even the fuel is the same, peat. The population is only about 1500; yet the group, partly no doubt because of its excellent harbours, is organized as a Crown colony, the Governor residing at Stanley, in East Island.

The largest two islands are called respectively East and West Falkland.

DESCRIPTIVE TABLE.

Acapulco, *ak-a-pool'ko,* a seaport of Mexico, in the Pacific. Pop., including suburbs, 12,320.—16° 50′ N. lat. 99° 49′ W. long.

Aconca'gua, one of the Andes of Chili; the highest mountain in the New World, being 23,910 feet above the sea. A river of the same name rises on the S. side of the mountain, flows S.W., and enters the Pacific 12 miles N. of Valparaiso.—Also the name of a province of Chili, possessing silver and copper mines. Pop. 133,928.

Alaba'ma (place of rest), one of the United States, bounded on the E. by Georgia; on the S. by Florida and the Gulf of Mexico; on the W. by Mississippi; and on the N. by Tennessee. The soil is fertile, producing cotton, sugar, wheat, oats, and barley. Area, 50,722 square miles. Pop. 1,262,505. **Montgomery,** on the Alabama, is the state-capital. Pop. 16,713.

Alago'as, a city of Brazil, in the province of the same name. Pop. 12,000.

Alas'ka, a territory belonging to the United States, America. Area, 580,107 square miles. Pop. 30,146. *See* REMARKS, page 351. The peninsula of Alaska is on the N.W. coast, between Bristol Bay and Cook Inlet; it is 350 miles in length.

Al'bany, the state-capital of New York, United States, situated on the Hudson, at its junction with the Erie Canal. Pop. 90,758.—42, 39 N. 73, 41 W.

Alber'ta, a province of the Dominion of Canada, formed in 1882 out of the S.W. part of the North-West Territories. It lies E. of the Rocky Mountains, and extends southward to the boundary of the United States. Area, 100,000 square miles. **Calgary** is the capital.

Aleu'tian Islands (bold rocks), a volcanic group in the N. Pacific, belonging to the United States, between Cape Alaska and Kamtschatka. The **Fox Islands** are the most important of the group. Pop. 8000.

Alexan'dria, a town of the United States, State of Virginia, on the Potomac. Pop. 13,659.

Alleghany, *al-le-gā'ne,* **Mountains,** *See* REMARKS, page 348.

Alleghany, a city of Pennsylvania, United States, a suburb of Pittsburg. Pop. 78,682.

All Saints, Bay of, a large and commodious bay of Brazil, on the coast of Bahia, containing several fertile islands.

Am'azon or Mar'anon River. *See* REMARKS, pages 361, 368.

Amherstburg, *am'erst-boorg,* a town and fort of Ontario, Canada, on the Detroit, 5 miles above its junction with Lake Erie. Pop. 2672.

An'des, or Cordil'leras. *See* REMARKS, pages 358, 360, 361, 362, 363.

An'dover, a town of Massachusetts, United States. Pop. 5171.

Anega'da. *See* **Virgin Isles.**

Anguilla, *an-gheel'ya* (eel-shaped island), or **Snake Island,** one of the West India Islands, belonging to Britain; it is a dependency of St Kitts, Leeward group. Area, 35 square miles. Pop. 2500.

Ann, Cape, the north point of Boston Bay, in Massachusetts, United States.—42, 38 N. 70, 34 W.

Annap'olis (named in honour of Queen Anne), a seaport of Nova Scotia, on the Bay of Fundy. Pop. 2833.—44, 42 N. 65, 44 W. *See* also **Maryland.**

Anticos'ti, an island in the mouth of the River St Lawrence, 125 miles in length by 30 miles in breadth. It is embraced in the province of Quebec.

Antigua, *an-te'gā,* one of the British West India Islands, Leeward group, about 20 miles long, and nearly of the same breadth. The staple articles of export are sugar, molasses, and rum. Area, 108 square miles. Pop. 34,964 **St John** is the capital.

Antilles, *an-teel',* a name given to the West India Islands. The French apply the term to the West Indies generally, exclusive of the Bahamas. *See* page 355.

Arequi'pa, a city of Peru, the capital of a department of the same name. It stands at the foot of a volcano 20,000 feet high, and was ruined by an earthquake in 1868. Pop. 29,237.

Argentine Republic. *See* page 364.

Aris'pe, a city of Mexico, in the department of Sonora. Pop. 4500.

Arizo'na, a territory of the United States, bounded N. by Nevada and Utah; E. by New Mexico; S. by Mexico; W. by California. Area about 114,000 square miles. Pop. 40,440. The capital is **Tucson.** Pop. 7007.

Arkan'sas, a large river which

rises in the Rocky Mountains, and, flowing S.E., falls into the Mississippi after a course of about 2000 miles.

Arkan'sas, one of the United States, bounded on the E. by the Mississippi, which divides it from Mississippi and Tennessee; S. by Texas and Louisiana; W. by the Indian Territory; and N. by Missouri. The region along the lower course of the Arkansas is fertile but swampy; it is covered with dense forests. Area, 52,198 square miles. Pop. 802,525. **Little Rock** is the state-capital. Pop. 13,183.

Assin'iboia, a province of the Dominion of Canada, W. of Manitoba, formed in 1882 out of the S.E. part of the North-West Territories. Area, 95,000 square miles. The capital is **Regina.**

Asuncion', or Assump'tion, the capital of Paraguay, on the river of that name. Pop. 20,000.

Athabas'ca, called also the **Lake of the Hills**, in the North-West Territories of the Dominion of Canada, is situated about 170 miles S.E. of the Great Slave Lake. It is nearly 200 miles long.

Athabas'ca, a province of the Dominion of Canada, formed in 1882 out of the North-West Territories. It is bounded on the W. by British Columbia, and S. by Alberta. Area 122,000 square miles.

Au'burn, a town of New York, United States, containing a large and celebrated reformatory prison. Pop. 21,924.

Augus'ta, a town of Georgia, United States, on the Savannah, the great depôt for the cotton of Upper Georgia. Pop. 21,891.

Ayacucho, *i-ā-koo'cho*, or **Guaman'ga**, a city of Peru, capital of a department of the same name. Pop. 25,000.

Back River, or Great Fish River, rises to the N. of Lake Aylmer, North-West Territories of the Dominion of Canada, near the source of the Coppermine River, and, flowing N.E., falls into a bay of the Arctic Ocean.

Baf'fin Bay, a large gulf, more properly an inland sea, between the N.E. shores of the continent and the W. coast of Greenland, opening into the Atlantic by Davis Strait, and into the Polar Sea by Lancaster Sound and Barrow Strait. It was named in honour of William Baffin, by whom it was discovered in 1616.

Baha'mas, a numerous group of islands belonging to Britain, stretching from Florida to St Domingo, on the remarkable sandbanks and coral reefs called the Bahama Banks. They export cotton, fine timber, dyewoods, and salt. The principal islands are New Providence, St Salvador, Long Island, and Crooked Island. Total pop. 43,521. **Nassau'**, the capital of New Providence, is also the seat of government. Pop. 8000.

Bahi'a (the bay or harbour), or **San Sal'vador**, a large commercial city and seaport of Brazil, situated at the entrance of the noble bay of All Saints. It was once the capital of the empire, and, with the exception of Rio Janeiro, is the largest city in South America. Pop. 200,000.—13, 0 S. 38, 31 W.

Balize, *bā-leez'*, the chief town of the British settlement of Honduras, on the coast of Yucatan, at the mouth of the river of the same name. Pop. of town and settlement, 27,452; of town alone, 5000.—17, 29 N. 88, 8 W.

Bal'timore, an important city and seaport of Maryland, United States, situated near the head of Chesapeake Bay. Pop. 332,313.

Ban'da Oriental'. *See* **Ur'uguay.**

Ban'gor, a flourishing commercial town of Maine, United States, on the Penobscot. Pop. 16,856.

Barba'does (the island of pines), one of the Windwards, the most eastern of the British West India Islands, 21 miles in length and 14 in breadth. Besides sugar, the great staple, it exports molasses, ginger, cotton, and arrowroot. Area, 166 square miles. Pop. 171,889. **Bridge'town**, the capital, is one of the handsomest towns in the West Indies. Pop. 18,957.—13, 5 N. 59, 41 W.

Barbu'da, one of the West India Islands, belonging to Britain; it lies to the N. of Antigua. Pop. 813.

Barrow Point, the extreme N.W. point of the continent.—71, 23 N. 156, 21 W.

Barrow Strait, a continuation of Lancaster Sound, a broad inlet from Baffin Bay into the Polar Sea.

Basse-Terre, *bass-tair'*, capital of the West Indian island of St Christopher. Pop. 8500.—Also the capital of the island of Guadeloupe. Pop. 9480.

Bath, a considerable seaport of Maine, United States, at the mouth of the Kennebeck. Pop. 7874.

Beh'ring Strait. *See* **Asiatic Russia**, page 255.

Belfast', a seaport of Maine, United States, situated on Belfast Bay. Pop. 5308.—44, 27 N. 68, 58 W.

Belleisle, *bel-īl'* (beautiful island), a small rocky island at the N.E. end of the channel between Labrador and Newfoundland, called the Strait of Belleisle.

Belleville, *bel'vil* (beautiful town), a thriving city of Ontario, Canada, on both sides of the River Moira, which falls into the Bay of Quintè. Pop. 9516.

Ben'nington, a town of Vermont, United States, at the foot of the Green Mountains. Pop. 6333.

Berbice', a district of British Guiana, South America, S.E. of Demerara. Pop. 35,557. **New Amsterdam**, at the mouth of Berbice River, is the capital. Pop. 5437.

Bermu'das or **Somers Islands**, a group in the Atlantic, about 600 miles E. of S. Carolina, surrounded by coral reefs. They produce arrowroot, cedar, coffee, and cotton. Area, 24 square miles. Pop. 13,948. Long Island or Bermuda proper is the largest, and on it is the town of **Hamilton**, the seat of Government.

Blan'co, Cape, the S. point of the Gulf of Guayaquil.—4, 20 S. 81, 15 W.

Bogota', or **Santa Fé de Bogota'**, the capital of Colombia, South America, Pop. 50,000.—4, 35, N. 74, 10 W. *See* REMARKS, page 358.

Boliv'ia. *See* page 362.

Boo'thia, a peninsula in the most northern part of America. It is naked and barren, but contains valuable fur-bearing animals.

Bos'ton, the principal city and seaport of Massachusetts, United States, beautifully situated on a peninsula of Massachusetts Bay. It is celebrated as the birthplace of Franklin, and the cradle of American Independence; and may be considered the literary capital of the Union. Pop. 362,839.

Brazil'. *See* page 368.

Bris'tol, a seaport of Rhode Island, United States, situated on a bay. Pop. 11,391.—Also a town of Pennsylvania, on the Delaware, 20 miles above Philadelphia. Pop. 5273.

British Colum'bia, a province of the Dominion of Canada, bounded on the N. by the 60th parallel of latitude; on the E. by the Rocky Mountains; on the S. by the United States; and on the W. by the Pacific Ocean, Queen Charlotte Sound, and the Gulf of Georgia. It is about 764 miles long and 400 miles broad, and has an area of about 341,300 square miles. Pop. 49,459. **Victoria**, near the S.E. extremity of Vancouver Island, is the capital. *See* REMARKS, page 344.

Brock'ville, a thriving town of Ontario, Canada, on the St Lawrence, 48 miles east of Kingston. Pop. 12,514.

Brook'lyn, a town of New York, United States, situated on Long Island, opposite New York. Pop. 566,663.

Buen Ayre, *bwen ī'rā* (good air), a small island of the Caribbean Sea, belonging to Holland. Pop. 4246.

Bue'nos Ay'res, one of the states of the Argentine Republic; it stretches along the Atlantic Ocean from Patagonia to the mouth of the Rio de la Plata. Area about 83,615 square miles. Pop. 700,000.

Bue'nos Ay'res, a maritime city, the capital of the Argentine Republic, situated on the S. shore of the Rio de la Plata. It was founded by the Spaniards in 1535, is well fortified, and has a great trade. Pop. 300,000.—34, 35 S. 58, 22 W.

Buf'falo, a flourishing commercial town of New York, United States, situated at the junction of the Erie Canal with Lake Erie, 22 miles from Niagara, and 460 miles from New York. Pop. 155,134.—42, 53 N. 78, 55 W.

Bur'lington, a town of Vermont, United States, on the E. Shore of Lake Champlain; it is the seat of a university. Pop. 11,365.—Also a town of Iowa. Pop. 19,450.

Cachoeira, or **Caxoeira**, *kā-sho-ā'e-rā* (waterfall), a town of Brazil, province of Bahia; a mart for the produce of gold mines. Pop. 15,000.

Califor'nia, Lower or **Old**, a narrow peninsula in the Pacific, separated from Mexico (to which it belongs) by the Gulf of California, 700 miles long, and from 50 to 80 miles broad. Pop. 23,195.

Califor'nia, Upper or **New**, a country on the Pacific, extending from Oregon to the head of the Gulf of California. It formerly belonged to Mexico, but was ceded to the United States by the treaty of 1848. Part of it was, in 1850, formed into a state, having an area of 188,982 square miles, and a population of 864,694. **Sacramento** is the state-capital. The country is traversed from N. to S. by two mountain ridges, the Snowy Mountains and the Rocky Mountains; from the latter the Rio Colorado takes its rise, and, flowing S.W., enters the Gulf of California. The Sacramento, with its tributary the San Joachim, from the N.W., falls into the noble Bay of San

Francisco. Valuable gold-mines, along the course of the Sacramento, were accidentally discovered in September 1847. The gold-region extends nearly 500 miles along the branches of the Sacramento and San Joachim rivers.

Calla'o (creek or bay), a seaport of Peru, with an excellent harbour. It is the port of Lima, from which it is six miles distant. Pop. 40,000.—12, 4 S. 77, 14 W.

Cam'bridge, a town of Massachusetts, United States, 3 miles from Boston; it is the seat of a university. Pop. 52,669.

Cameta, *kä-mä'tä*, a town of Brazil, in the province of Para, at the mouth of the Tocantins. Pop. 20,000.

Campeachy, *kam-pee-che*, a seaport of Yucatan, on the bay of the same name. Pop. 15,196.—19, 50 N. 90, 33 W.

Can'ada. *See* REMARKS, page 344.

Can'so, a small island at the N.E. extremity of Nova Scotia, with a cape of the same name.—45, 17 N. 61, 0 W.

Cape Bret'on, an island of the Dominion of Canada, separated from Nova Scotia by the narrow strait called the Gut of Canso. It is politically one with Nova Scotia, and is about 100 miles in length and 72 miles in breadth. A navigable arm of the sea divides it nearly into two parts. The climate, like that of Newfoundland, is cold and foggy. The island has valuable coal-mines and fisheries. Pop. 84,500.

Cape Bret'on, the eastern point of the island of the same name.—45, 56 N. 59, 50 W.

Cape Cod, the eastern projection of Massachusetts, United States, forming the S.E. point of Massachusetts Bay.—42, 2 N. 70, 4 W.

Cape Hay'tien, formerly Cape Fran'çais, a seaport of Hayti, on its N. coast. Pop. about 12,000.—19, 46 N. 72, 12 W.

Carac'cas, the capital of Venezuela, in a fertile valley; it has a good trade. Simon Bolivar, the great champion of South American Independence, was born here in 1780. Pop. 55,638.—10, 30 N. 67, 4 W.

Caribbe'an Sea, that part of the Atlantic lying between Central and S. America, and the islands of Cuba, Hayti, and Porto Rico.

Caribbee' Islands, that portion of the West India Islands extending in a semicircle from Porto Rico to Trinidad.

Caroli'na, North, one of the United States, bounded on the N. by Virginia; W. by Tennessee; S. by Georgia and South Carolina; and E. by the Atlantic. Area, 50,704 square miles. Pop. 1,399,750. **Ra'leigh** is the state-capital. Pop. 9265.

Caroli'na, South, one of the United States, bounded on the N. by North Carolina; on the W. and S. by Georgia; and on the E. by the Atlantic. For 100 miles inland from the coast the country is low, swampy, and unhealthy; beyond this it is finely diversified with hill and dale, and is fertile and richly wooded. The chief products are cotton and rice. Area, 34,000 square miles. Pop. 995,577. **Colum'bia** is the state-capital. Pop. 10,036.

Cartage'na, a city on the N. coast of Colombia, South America, with a fine harbour and naval arsenal. Pop. 25,000.—10, 25 N. 75, 34 W.

Catoché, a cape on the N. coast of Yucatan.—21, 31 N. 87, 0 W.

Caxamar'ca, or **Cajamarca** (place of frost), a city of Peru, in a department of the same name; here, in 1533, Atahualpa, the last of the Incas, was put to death by Pizarro. Pop. 7000.

Cayenne, *kä-yen'*, an island near the coast of French Guiana, South America, belonging to France. It is a penal settlement, and is extremely unhealthy, being low, swampy, and covered with forests. A species of capsicum takes the name of Cayenne pepper from this island. Area about 35,080 square miles.—**Cayenne**, the capital, is situated on the W. point of the island; it is the seat of government of the French colony of Guiana. Pop. 8000.

Central America. *See* page 354.

Cha'gres, a seaport of Colombia, South America, on the N. side of the Isthmus of Panama. Pop. 2000.—9, 18 S. 79, 59 W.

Champlain', Lake, in Vermont, United States, 105 miles in length, and 10 in its greatest breadth.

Charles, Cape, at the eastern extremity of Labrador.—52, 20 N. 55, 45 W.—**Cape Charles**, in Virginia, United States, on the N. point of Chesapeake Bay.—37, 10 N. 75, 45 W.

Charles'ton, the principal city and seaport of South Carolina, situated at the head of a bay on a peninsula formed by the Ashley and Cooper rivers. It maintained, during the late civil war, a resolute resistance against numerous attacks by the Federals. Pop. 49,984.—32, 46 N. 79, 57 W.

Charles'town, a former city of

Massachusetts, near the celebrated Bunker's Hill, now merged in Boston, with which it is connected by a bridge.

Chatham, *chat'am*, a town of Ontario, Canada, on the River Thames. Pop. 7873.

Ches'apeake, the largest and safest bay on the Atlantic coast of the United States, extending N. about 200 miles from between Cape Charles and Cape Henry in Virginia.

Chicago, *she-kaw'go*, the largest town and chief seat of trade of Illinois, United States, on Lake Michigan. Pop. 503,185.

Chihua'hua, *che-wá'wá*, a city of Mexico, the capital of the department of the same name, in the vicinity of rich silver-mines. Pop. 13,000.—28, 40 N. 105, 33 W.

Chi'li. *See* page 363.

Chi'loë, a cluster of islands at the S. extremity of Chili. Chiloë, the largest, is 120 miles long and 40 miles broad. Pop. 69,823.

Chimbora'zo, a mountain of Ecuador, one of the loftiest of the Andes, being 20,517 feet above the level of the sea.

Cholu'la, a city of Mexico, 15 miles W.N.W. of Puebla. Here is an ancient pyramid 177 feet high; each side of its base measures 1423 feet. Pop. 8973.—19, 0 N. 98, 15 W.

Chud'leigh, Cape, the northern point of Labrador, at the entrance of Hudson Strait.—60, 25 N. 65, 20 W.

Chuquisa'ca, or Sucre, a city of Bolivia, on a small affluent of the Cachimayo. Pop. 12,000.—19, 3 S. 64, 30 W.

Cincinna'ti, the chief town of Ohio, United States, finely situated on the Ohio. It has a college, flourishing manufactures, and is a great emporium of trade. Pop. 255,139.

Cleve'land, a port of entry and city of Ohio, United States, on Lake Erie. It has extensive manufactures of iron, and the refining of oil is an important branch of industry. Pop. 160,146.

Co'ban, a town of Guatemala, on a river flowing into the Gulf of Dulce. Pop. 13,000.

Co'bourg, a town of Ontario, Canada, pleasantly situated on the north shore of Lake Ontario. Pop. 4957.

Cochabam'ba, or Oropé'sa, a town of Bolivia, situated in a fruitful valley. It has manufactures of glass and cotton. Pop. 40,678.—17, 21 S. 65, 43 W.

Coli'ma, a town of Mexico, capital of the department of the same name. Pop. 38,428

Colom'bia. *See* page 357.

Colora'do, one of the United States bounded by Wyoming and Nebraska on the N.; by Nebraska and Kansas on the E.; by New Mexico on the S.; and by Utah on the W. Area, about 105,000 square miles. Pop. 194,327. The state-capital is **Den'ver**. Pop. 35,629.

Colum'bia, a district of the United States, on the Potomac, surrounded by Virginia and Maryland. It is under the immediate jurisdiction of Congress, and contains Washington, the seat of government and capital of the Union. Area, 50 square miles. Pop. 177,624. **Columbia** is also the name of the state-capital of South Carolina.

Colum'bia, or Or'egon, a large river of North America, rises in the Rocky Mountains, and, after a course of 1000 miles, falls into the Pacific Ocean.

Colum'bus, a city of the United States, capital of Ohio, is pleasantly situated on the east bank of the Scioto River, 90 miles from its mouth. Pop. 51,647.

Comayagua, *ko-mi-á'gwa*, a city of Central America, state of Honduras. Pop. 10,000.

Concep'cion, a seaport of Chili, on a fine bay. Pop. 18,277.—36, 44 S. 72, 56 W.

Connec'ticut, one of the United States, bounded on the N. by Massachusetts; on the W. by New York; on the E. by Rhode Island; and on the S. by Long Island Sound. It has a fertile soil, with considerable trade and manufactures. Area, 4674 square miles. Pop. 622,700. **Hart'ford**, on the River Connecticut, is the state-capital. Pop. 42,015.

Connec'ticut, a river of the United States, has its source on the N. borders of Vermont and New Hampshire, and flows S. into Long Island Sound.

Cook's Inlet, an arm of the sea on the N.W. coast.

Copia'po, a volcano of the Andes, Chili. Height estimated at 17,000 feet.—Also a seaport of Chili, on a river of the same name. It has been repeatedly destroyed by earthquakes.—27, 20 S. 71, 2 W.

Cop'permine River, in the North-West Territories of the Dominion of Canada, discovered by Hearne in 1771; it flows northward into the Arctic Ocean.

Coquim'bo, a seaport of Chili, the capital of a province abounding in gold,

silver, and copper. Pop. 7138.—29, 51 S. 71, 25 W.

Cordil'lera, the Spanish name of a mountain chain, frequently applied to the Andes.

Cor'dova, or **Cor'doba**, a city of the Argentine Republic, the capital of a province; it has considerable manufactures. Pop. 30,000.—31, 26 S. 63, 58 W.

Corona'tion Gulf, a large inlet of the Northern Ocean, discovered by Captain Franklin. At its eastern entrance is Point Turnagain.

Corrien'tes, a city of the Argentine Republic, capital of a province of the same name; it is situated on the Parana. Pop. 11,000.

Corrien'tes, a cape of Mexico, W. coast.—20, 25 N. 105, 43 W.

Cos'ta Ri'ca, a state of Central America, extending from the state of Nicaragua to New Granada, and from the Caribbean Sea to the Pacific. Area, 23,000 square miles. Pop. 185,000. **San Jo'sé** is the capital. Pop. 25,000.

Cotopax'i, a volcanic mountain of Ecuador, 34 miles S.E. of Quito. It is a perfect cone, rising 19,500 feet above the level of the sea, and is the most beautiful of the Andes.

Cu'ba, the largest of the West India Islands. It is 764 miles in length by 60 miles of average breadth, and is traversed from E. to W. by a chain of mountains covered with noble forests. Its soil is very fertile, producing excellent sugar, coffee, and tobacco. It has rich copper-mines. The island enjoys a delightful climate, and hurricanes are rare. Area, 48,489 square miles. Pop. 1,424,649.

Cuen'ca, a city of Ecuador, in the department of Assuay. Pop. 25,000.—2, 53 S. 79, 16 W.

Culia'can, a town of Mexico, 90 miles S.E. of Cinaloa. Pop. 19,551.

Cumana', a seaport of Venezuela, in a district of the same name, on a gulf of the Caribbean Sea. Pop. 16,656. —10, 27 N. 64, 11 W.

Curaço'a, an island of the Caribbean Sea, off the N. coast of Venezuela, about 40 miles long and 10 miles broad. It belongs to the Dutch. Pop. 23,790. **Wil'liamstadt**, its capital, has a fine harbour.

Cuya'ba, a city of Brazil, capital of the province of Matto Grosso, on a river of the same name. It has an active trade in diamonds, of which there are rich mines in its neighbourhood. Pop. 15,000.

Cuz'co, a city of Peru, formerly the capital of the Incas, and held sacred by the Peruvians. It is 11,400 feet above the sea, and still retains traces of its ancient splendour. Pop. 18,370.—13, 30 S. 72, 4 W.

Dako'ta, a territory of the United States, is bounded on the N. by British America; E. by Minnesota and Iowa; S. by Nebraska; W. by Wyoming and Montana. Area, 150,932 square miles. Pop. 135,177. The capital is **Yankton**, on the Missouri. Pop. 3431.

Da'rien, an extensive gulf of the Caribbean Sea, on the north coast of the Isthmus of Panama or Darien.

Da'vis Strait, a narrow sea discovered by Captain John Davis in 1585, when in search of a north-west passage. It connects the Atlantic Ocean with Baffin Bay.

Del'aware, one of the smallest of the United States, lying along the western coast of a bay of the same name; bounded on the N. by Pennsylvania; and on the W. and S. by Maryland. Area, 2120 square miles. Pop. 146,608. **Do'ver** is the state-capital. Pop. 2594.

Del'aware, a river of the United States, which is formed by two streams in the state of New York. Separating Pennsylvania from New Jersey, it flows past Philadelphia, and enters Delaware Bay between Delaware and New Jersey.

Demera'ra, a district of British Guiana, South America, between Berbice and Essequibo. Pop. 86,250.

Den'ver, the state-capital and chief commercial emporium of Colorado, United States, is situated on the right bank of the South Platte River. Pop. 35,629.—39, 45 N. 104, 50 W.

Desirade, *dā-ze-rad'*, one of the West India Islands, belonging to the French; it lies to the east of Guadeloupe. Pop. 1607.

Detroit', French pronunciation, *dā-trwā'*, a city of the United States, formerly the capital of Michigan; it stands on the west side of the River Detroit, between the lakes of St Clair and Erie. Pop. 116,340.

Domini'ca, one of the British West India Islands, Leeward group, about 29 miles in length and 9 miles in average breadth. It produces coffee, sugar, and timber. Area, 291 square miles. Pop. 28,211. **Roseau'**, the capital, has a population of 5000.

Do'ver, a town of New Hampshire, United States. Pop. 11,687.—Also the state-capital of Delaware.

Dulce, *dool'sā*, a lake of Central America, state and 102 miles N.E. of Guatemala. It is sometimes called **Golfo Dulce**.—Also the name of a gulf on the coast of Costa Rica.

Duran'go, or **Victo'ria**, a city of Mexico, the capital of the department of Durango. Pop. 28,538.

Ecua'dor. *See* page 360.

E'rie, Lake, one of the great chain of lakes which divides Canada from the United States. It is 250 miles in length and 80 miles at its greatest breadth, covering an area of 11,000 square miles. It discharges its waters by the Niagara into Lake Ontario. It is subject to violent storms, which, with rocks projecting many miles from the shore, render the navigation dangerous.

Essequi'bo, a district of British Guiana, South America, bordering on Venezuela.

Essequi'bo, a river of British Guiana, which rises in the Parimè Mountains, and flows through magnificent forests. After a course of 450 miles, it falls into the Atlantic.

Fair'weather, Mount, a mountain in Alaska, 14,750 feet high.

Falk'land Islands. *See* page 371.

Fare'well, Cape, the S. extremity of Greenland.—59, 49 N. 43, 51 W.

Fear, Cape, on the coast of North Carolina, at the entrance of Cape Fear River, where there is a dangerous shoal.—33, 54 N. 78, 0 W.

Flat'tery, Cape, on the W. coast of the United States.—48, 20 N. 124, 15 W.

Flor'ida, one of the United States, bounded on the N. by Alabama and Georgia; on the E. by the Atlantic; and on the S. and W. by the Gulf of Mexico and the State of Florida. It is a peninsula 385 miles in length, stretching southward between the Gulf of Mexico and the Atlantic. The seacoast and the banks of the rivers are swampy, but grow rice and corn; the interior is hilly, and yields valuable timber. Area, 59,268 square miles. Pop. 269,493. **Tallahas'see** is the state-capital. Pop. 2494.

Flor'ida Strait or **Channel**, between Florida, Cuba, and the Bahamas, through which the remarkable current called the Gulf Stream, from the Gulf of Mexico, rushes with great force to the N.E.

Fox Islands. *See* **Aleutian Islands.**

Frank'lin, a town of Missouri, United States, on the Missouri; also the name of other towns in the Union. Pop. 1938.

Frazer River, in British Columbia, rises in the Rocky Mountains, and, after a S.W. course of about 450 miles, falls into the Gulf of Georgia.

Fred'erick, a town in Maryland, United States. Pop. 8659.

Fred'ericksburg, a town of Virginia, United States. Pop. 5010.

Fred'ericton, the capital of New Brunswick, situated on the River St John, 65 miles from its mouth. Pop. 6218.—45, 56 N. 66, 45 W.

Fri'o, Cape, in Brazil, N.E. of Rio Janeiro.—23, 0 S. 41, 58 W.

Fun'dy, a bay which extends 150 miles between Nova Scotia and New Brunswick. At the upper part, where it divides into two arms, the rise of the tides sometimes exceeds 60 feet; while in Verte Bay, on the opposite or St Lawrence side of the isthmus, the rise is not more than 10 feet.

Fu'ry and Hec'la Strait, between Cockburn Island and Melville Peninsula, expanding into the Gulf of Boothia.

Galapa'gos, a group of islands in the Pacific Ocean, off the coast of Ecuador, immediately under the equator. They abound in turtle, and in cedar.

Galt, a town of Ontario, Canada, pleasantly situated on the Grand River, 25 miles N.W. of Hamilton. Pop. 5187.

Gal'veston, a seaport of Texas, United States, on an island in the Gulf of Mexico. Pop. 22,248.

Gas'pè, a cape of Quebec, Canada, Gaspè Bay, at the mouth of the St Lawrence.—48, 45 N. 64, 12 W.

George'town, a town in the district of Columbia, United States, on the Potomac, near Washington. Pop. 12,578.—A seaport of South Carolina, at the mouth of the Great Pedee, Pop. 2557.

George Town, the capital of British Guiana, South America, is situated near the mouth of the River Demerara. It is built of wood. Pop. 36,567.

Geor'gia, one of the United States, bounded on the N. by Tennessee and North Carolina; E. by South Carolina and the Atlantic; S. by Florida; and W. by Alabama. Its chief products are cotton, rice, and Indian corn. Area, 58,000 square miles. Pop. 1,542,180. **Atlan'ta** is the state-capital. Pop. 37,421.

Gloucester, *glos'ter*, a seaport of

Massachusetts, United States, on Boston Bay. Pop. 19,329.

Go-yaz' (formerly **Villa Boa**), a city of Brazil, the capital of a province of the same name. Pop. 8000.

Gra'cias a Di'os, Cape, in the N. of Central America, in the state of Honduras.—14, 59 N. 83, 11 W.

Grana'da, a city in Central America, in the state of Nicaragua, on the S.W. shore of the lake, with a flourishing trade. Pop. 10,000.

Great Bear Lake, in the N.W. of the Dominion of Canada. It has an area of about 14,000 square miles, and communicates with Mackenzie River.

Great Slave Lake, in the N.W. of the Dominion of Canada, extends about 330 miles from E. to W., with an average breadth of 50 miles.

Green'land. *See* page 343.

Grena'da, one of the British West India Islands, Windward group; its greatest length is 25 miles, and breadth 12 miles. It is finely wooded, and produces sugar, rum, cocoa, and cotton. Area, 133 square miles. Pop. 42,403. **St George,** the capital, has an excellent harbour.

Guadalaxa'ra, a city of Mexico, the capital of the department of Xalisco, situated on the Rio Grande de Santiago. Pop. 91,685.—21, 9 N. 103, 4 W.

Guadeloupe, *gad-e-loop',* one of the West India Islands, belonging to France; it is about 60 miles long and 25 miles broad, and is divided into two parts by a narrow channel. Pop. 131,090. **Basse-Terre,** the capital, has a population of 9180; but **Pointe-à-Pitre** is the chief commercial town; it has a population of 15,172.

Guaman'ga. *See* **Ayacucho.**

Guanaxua'to, a city of Mexico, the capital of the department of the same name. Pop. 58,232.—21, 0 N. 100, 55 W.

Guatema'la, the largest state in Central America; it extends from Yucatan to the Pacific, and is bounded W. by Mexico, and E. by the states of Honduras and San Salvador. Area, 45,747 square miles. Pop. 1,252,497.

Guatema'la, New, a city in Central America, the capital of the state of Guatemala. Pop. 55,728.—14, 37 N. 90, 30 W. Old Guatemala, about 25 miles to the S.W., was destroyed by an earthquake in 1774, but has been since rebuilt. Pop. 15,000.

Guayaquil, *gwi-a-keel',* a city and seaport of Ecuador, the capital of the province of Guayas, at the head of the gulf of Guayaquil. It has one of the best harbours on the Pacific. Pop. 22,000.—2, 11 S. 79, 50 W.

Guay'mas, a seaport of Mexico, on the Gulf of California.—27, 56 N. 110, 16 W.

Guelph, a city of Ontario, Canada, 30 miles N. of Hamilton. Pop. 9890.

Guia'na. *See* page 370.

Guia'na, British. *See* page 371.

Hal'ifax, the capital of Nova Scotia, situated on the south-east coast. Its noble harbour is the chief naval station of British America. Pop. 36,100.—44, 39 N. 63, 37 W.

Ham'ilton, a thriving city of Ontario, Canada, at the W. extremity of Lake Ontario. Pop. 35,961.

Har'risburg. *See* **Pennsylvania.**

Hart'ford, a manufacturing town, state-capital of Connecticut, United States, on the right bank of the River Connecticut, 50 miles from its mouth. Pop. 42,015.

Hat'teras, a dangerous cape of N. Carolina, United States.—35, 14 N. 75, 30 W.

Havan'nah, or **Havan'a,** the capital of Cuba, situated on the N. coast of the island. It is strongly fortified, and its port is the finest in the West Indies. As a commercial city, it is one of the greatest and most flourishing in the New World. Pop. estimated at 230,000 —23, 9 N. 82, 22 W.

Hay'ti, or **San Domin'go,** one of the Greater Antilles, and, next to Cuba, the largest of the West India Islands, being about 400 miles in length and 150 miles in its greatest breadth. It has valuable mines. The soil of the plains is exceedingly fertile, and produces excellent timber. The western part of the island formerly belonged to France, but is now a negro republic, with **Port-au-Prince** for its capital; the eastern part formerly belonged to Spain, but is now a republic, with **San Domingo** for its capital. Pop. 800,000.

Hen'ry, Cape, in Virginia, at the south point of the entrance of Chesapeake Bay.—36, 56 N. 75, 53 W.

Hondu'ras, a state in Central America, bounded on the W. by Guatemala; S. by San Salvador and Nicaragua; and N. by the Gulf of Honduras. Area, 38,088 square miles. Pop. 350,000. **Tegucigalpa** is the capital. Pop. 10,000.

Hondu'ras, British. *See* **Balize.**

Horn, Cape, a celebrated promontory, in an island on the S. of Tierra

del Fuego; the most southern point of America.—55, 59 S. 67, 16 W.

Hous'ton, a town of Texas, United States, 60 miles N.W. of Galveston. Pop. 16,513.

Huancavelica, *wân-kâ-vā-le'kâ*, a mining town of Peru, the capital of a department of the same name, 80 miles N.W. of Ayacucho. It is 11,000 feet above the sea. Its mines of quicksilver are among the richest in the world. Pop. 3937.

Hud'son, a city of New York, United States, on the River Hudson, with a good trade. Pop. 8670.

Hud'son (named from Henry Hudson, who ascended it in 1607), a fine river of the United States, which has its source in the mountains between Lakes Ontario and Champlain, and, flowing southward, falls into the sea at New York, after a course of 325 miles.

Hud'son Bay, a great inland sea. Including its S. extremity, called James Bay, its length from north to south is about 1000 miles, and its greatest breadth 560 miles. It communicates with the Atlantic by Hudson Strait, and on the north with Baffin Bay and the Arctic Ocean. It abounds with fish, and on its E. coast iron-ore is very abundant. On its W. coast are the stations of *Churchill Fort, York Fort, Albany Fort*, and *Moose Fort*. The harbours of Churchill and Nelson are capacious, and it has been proposed to establish a steamboat route between one or both of them and Europe, implying a railway to Winnipeg.

Hu'ron, Lake, one of the great lakes which separate Canada from the United States. Its length is 200 miles, its breadth 160 miles, and its mean depth 300 feet. It communicates by straits with Lake Superior and with Lake Michigan on the W., and by the Lake of St Clair and the River Detroit with Lake Erie on the S.E. Along its northern shore is a chain of richly wooded islands called the Manitoulin or Sacred Isles.

I'cy Cape, on the N.W. coast, the farthest point reached by Captain Cook.—70, 20 N. 161, 46 W.

I'daho, a territory of the United States, is bounded N. by the British possessions; E. by Montana and Wyoming; S. by Nevada and Utah; W. by Oregon and Washington territory. Area about 86,294 square miles. Pop. 32,610. The capital is **Boisée**. Pop. 1899.

Illinois, *il-lin-oi'*, one of the United States, is bounded E. by Indiana; N. by Wisconsin; S. by the Ohio; and W. by the Mississippi, which separates it from Missouri and Iowa. Area, 55,409 square miles. Pop. 3,077,871. **Spring'field** is the state-capital. Pop. 19,743.

Illinois, a river of the United States, which flows 400 miles through Illinois, and falls into the Mississippi 18 miles above the Missouri.

Indian'a, one of the United States, between Illinois and Ohio, bounded on the N. by Michigan, and on the S. by the Ohio, which separates it from Kentucky. Area, 33,809 square miles. Pop. 1,978,301. **Indianap'olis** is the state-capital. Pop. 75,056.

Io'wa, one of the United States, lying W. of the Mississippi, and N. of the State of Missouri. Area, 50,914 square miles. Pop. 1,624,615. **Des Moines** is the state-capital. Pop. 22,408.

Jack'sonville, a town of Illinois, United States. Pop. 10,928.

Jamai'ca, the largest of the British West India Islands. It lies nearly 100 miles W. of St Domingo, and the same distance S. of Cuba. It is 150 miles in length by 40 miles in average breadth. It is traversed from E. to W. by the lofty range of the Blue Mountains. The principal exports are sugar, rum, coffee, spices, and fruits. Area, 4200 square miles. Pop. 580,804. **Kingston** is the capital. Pop. 34,314.—*See* REMARKS, page 356.

James Bay. *See* **Hudson Bay**.

James River, in Virginia, United States, rises in the Alleghany Mountains, and, flowing eastward, falls into Chesapeake Bay.

Jer'sey City, a city of New Jersey, United States, on the W. bank of the Hudson, at its entrance into New York Bay. Pop. 120,722.

Jorul'lo, a remarkable volcano in the S. of Mexico; it rose from the plain to the height of 1640 feet, in 1759.

Ju'an Fernan'dez, an island in the Pacific Ocean, about 400 miles from the coast of Chili. It is 18 miles long by 6 broad, and is noted as having been, about 1703, the solitary residence of Alexander Selkirk for upwards of four years,—an event upon which Defoe founded his celebrated Adventures of Robinson Crusoe.

Kanawha', **Great**, a river of the United States, flows through West Virginia, and joins the Ohio near Gallipolis.

Kan'sas, one of the United States.

It has the Indian Territory to the S.; Missouri to the E.; Nebraska to the N.; and Colorado to the W. Area, 81,318 square miles. Pop. 996,096.

Kan'sas City, in the W. part of Missouri, United States, on Missouri River. Pop. 55,785.

Kentuck'y, one of the United States, bounded N. by the Ohio, separating it from Ohio, Indiana, and Illinois; W. by the Mississippi, separating it from Missouri; S. by Tennessee; and E. by Virginia. Area, 37,680 square miles. Pop. 1,648,690. **Frank'fort** is the state-capital. Pop. 6958.

Kewat'in, a district of the Dominion of Canada, to the E. and N. of Manitoba, and embracing the W. shore of Hudson Bay.

Kings'ton, the political and commercial capital of Jamaica, situated on the N. side of Port Royal Bay. Pop. 34,314.—17, 58 N. 76, 48 W.

Kings'ton, a strongly fortified city of Ontario, Canada, situated at the entrance of the Rideau Canal, on the N.E. point of Lake Ontario, near its outlet by the St Lawrence. Pop. 14,091.—44, 13 N. 76, 33 W.

Knox'ville, a town of Tennessee, in the United States, on the Holston. Pop. 9693.

Kot'zebue Sound, a large bay in Behring Strait, discovered by the Russian navigator Kotzebue in 1816.

Labrador', a wild and sterile region, a dependency of Newfoundland, consisting of a vast peninsula between Hudson Bay and the Atlantic, extending from 50° to 61° N. lat., and from 56° to 78° W. long. Its prevailing features are rocks, swamps, and mountains covered with forests. The Moravian missionaries have several settlements, which are inhabited chiefly by the Esquimaux.

La Guay'ra, a seaport of Venezuela, on the Caribbean Sea, about 16 miles from Caraccas, of which it is the port Pop. 10,486.—10, 36 N. 67, 0 W.

Lan'caster, a town of Pennsylvania, United States, 70 miles from Philadelphia. Pop. 25,769.

La Paz, the largest city and commercial metropolis of Bolivia; it is the capital of the province of the same name, and is situated near the S.E. end of Lake Titicaca. Near it are the mountains *Illimani* and *Sorata*, among the loftiest of the Andes. Pop. 76,372.

La Paz, a town of Mexico, and the capital of the territory of California. Pop. 8823.

Latacunga, *lâ-tâ-koong'gâ*, a town of Ecuador, near the lofty volcanic mountain of Cotopaxi. Pop. 17,000.—0, 50 S. 78, 45 W.

Law'rence, a manufacturing town of Massachusetts, U.S., on the Merrimac River. Pop. 39,151.

Lee'ward Islands, a British federal colony in the West Indies. *See* REMARKS, page 356.

Le Maire, Strait of, a channel or passage between Staten Island and Tierra del Fuego, South America, discovered in 1616 by the Dutch navigators Schouten and Le Maire, who passed through it and round Cape Horn, into the Pacific Ocean.

Le'on, a city in Nicaragua, Central America. Pop. 25,000.

Lex'ington, a town of Kentucky, United States, with a college and several manufactures. Pop. 16,656.

Lima, *le'ma*, the capital of Peru, situated on the Rimac, was founded, in 1534, by Pizarro, who is buried in its sumptuous cathedral. Here is a university, the oldest in the New World. The city suffers so frequently from earthquakes, that its houses are generally of only one story, with flat roofs. Pop. 100,000.—12, 2 S. 77, 5 W.

Litch'field, a town of Connecticut, United States. Pop. 3410.

Lon'don, a city of Ontario, Canada, on the Thames. Pop. 19,746.

Long Isl'and, an island of New York, United States, separated from Connecticut by Long Island Sound. It is about 115 miles in length by 13 miles of average breadth.

Lookout', Cape, on the coast of N. Carolina, United States, S. of Cape Hatteras.—34, 30 N. 76, 36 W.

Loret'to, a town of Lower California, on the gulf of that name.—26, 0 N. 110, 50 W.

Louisia'na, one of the United States, bounded S. by the Gulf of Mexico; W. by Texas; N. by Arkansas; and E. by Mississippi. It comprehends the Delta of the Mississippi, which annually overflows a large extent of country. The soil generally is very rich, producing cotton, sugar, and rice. Area, 41,225 square miles. Pop. 939,946. **New Orleans**, on the left bank of the Mississippi, is the state-capital. Pop. 216,090.

Lou'isville, the principal commercial town of Kentucky, United States, on the Ohio, just above the rapids. Pop. 123,758.—38, 13 N. 85, 40 W.

Low'ell, a flourishing town of Mas-

sachusetts, United States, at the junction of the Merrimac and the Concord, 20 miles from Boston. It is the chief seat of the cotton manufacture in the United States. Pop. 59,475.

Mackenzie River (named from its discoverer in 1789), is formed by the union of the Athabasca and the Peace rivers, which have their sources in the Rocky Mountains; flowing northward, it passes through the Great Slave Lake, and falls into the Arctic Ocean, after a course of about 1600 miles.

Madeira, *mâ-dā'râ*, the principal tributary of the great river Amazon, rises in Bolivia and joins the Amazon after a course of 1800 miles.

Magdale'na, a river of Colombia, South America, has its source in the Andes to the S. of Popayan, flows northward, and, after a course of 860 miles, falls into the Caribbean Sea.

Magel'lan, Strait of, a passage from the Atlantic to the Pacific Ocean. between the southern extremity of America and the island of Tierra del Fuego. It is 300 miles in length; its navigation is intricate and dangerous.

Maine, one of the United States, bounded on the N. by Canada; on the E. by New Brunswick; on the S. by the Atlantic; and on the W. by New Hampshire and Canada. Area, 31,766 square miles. Pop. 648,936. **Augus'ta**, on the Kennebec, is the state-capital. Pop. 8666.

Man'chester, a town of New Hampshire, United States. Pop. 32,630.

Manitoba', a province of the Dominion of Canada, known for many years as the Red River Settlement. Area, 123,200 square miles; population 65,954. **Winnipeg** is the capital.

Maracaybo, *mâ-râ-ki'bo* (the head land on the sea), a city of Venezuela, in the state of Falcon-Zulia, on the outlet of Lake Maracaybo. Pop. 22,224.

Maracay'bo, a lake of Venezuela, about 100 miles long and 70 miles broad, communicating by a strait with the Gulf of Maracaybo.

Marajo', or **Joan'nes**, an island of Brazil, separated from the continent by the estuaries of the Amazon and the Para. Extent, 10,000 square miles. Pop. 20,000.

Maranhão, *mâ-rân-yâ'o*, or **São Luiz**, *sown loo-eez'*, a city and seaport of Brazil, the capital of a province of the same name, is situated on an island in the mouth of the river of the same name. Pop 31,601.—2, 31 S. 44, 18 W.

Margari'ta, an island in the Caribbean Sea, belonging to Venezuela. Length 45 miles; breadth from 5 to 20 miles. Pop. 15,000. **Assump'tion** is the capital.

Mariegalante, *mâ-re'gâ-langt'*, one of the French West India Islands, to the S. of Guadeloupe. Pop. 15,017.

Martinique, *mar-tin-eek'*, or **Martini'co**, one of the French West India Islands. It has three lofty mountains and several fertile valleys. Its greatest length is 50 miles, and its mean breadth about 16 miles. Pop. 164,250. **Fort Royal**, or **Fort-de-France**, is the capital. Pop. 13,200.—14, 35 N. 61, 4 W.

Ma'ryland, one of the United States, situated on both sides of Chesapeake Bay, and separated from Virginia by the Potomac. It has large exports as well of iron as of tobacco, flour, and other agricultural products. Area, 11,124 square miles. Pop. 934,943. **Annap'olis** is the state-capital. Pop. 6642.

Massachu'setts, one of the United States; bounded on the E. by the Atlantic; on the N. by New Hampshire and Vermont; on the W. by New York; and on the S. by Connecticut and Long Island. It has flourishing manufactures, commerce, shipping, and fisheries. Area, 7800 square miles. Pop. 1,783,085. **Bos'ton** is the state-capital. Pop. 362,839.

Massachu'setts, a bay of the United States, extending from Cape Ann on the N. to Cape Cod on the S.

Matan'zas, a fortified seaport of Cuba, with a considerable trade. Pop. 36,102.—23, 0 N. 81, 40 W.

Mat'to Gros'so (formerly **Villa Bella**), a city of Brazil, in the province of the same name, on the Guapore, near the frontier of Bolivia. Pop. 15,000.

May, Cape, the S. point of New Jersey, at the entrance of Delaware Bay. —38, 56 N. 74, 46 W.

Mazat'lan, a seaport of Mexico, near the entrance of the Gulf of California. Pop. 17,395.—23, 12 N. 106, 22 W.

Mem'phis, a town of Tennessee, on the Mississippi. Pop. 33,593.

Mendoci'no, Cape, on the coast of Upper California.—40, 29 N. 124, 32 W.

Mendo'za, a city of the Argentine Republic, the capital of a province of the same name, situated in a plain at

the foot of the Andes. It was nearly destroyed by an earthquake in 1861.

Mer'ida, a city of Venezuela, State of Falcon-Zulia, on the Chama. It stands in a rich vale surrounded by mountains. Pop. 9727.—8, 12 N. 71, 5 W.

Mer'ida, the capital of Yucatan, situated on an arid plain. Pop. 43,282. —20, 50 N. 89, 40 W.

Mex'ico, the capital city of Mexico, situated in the centre of an elevated plain, surrounded by lofty mountains, with the beautiful lake of Tezcuco in the vicinity. Pop. 241,110.—19, 25 N. 99, 5 W.

Mex'ico, Gulf of, a large inland sea, communicating by the Florida Channel with the Atlantic, and by the Channel of Yucatan with the Caribbean Sea, and on the other sides enclosed by the United States, Mexico, and Yucatan. It is nearly 1200 miles in length from E. to W., with an average breadth of 650 miles.

Michigan, *mish'e-gan*, a large lake of the United States, 360 miles in length, with an average breadth of 60 miles, and navigable for vessels of any burden. It communicates with the N.W. extremity of Lake Huron, by the Straits of Michilimakinac.

Mich'igan, one of the United States, of which the larger portion is surrounded on three sides by Lakes Erie, St Clair, Huron, and Michigan. The other portion lies to the N.W., and is bounded on the N. by Lake Superior, and on the S. by Lake Michigan and the State of Wisconsin. The soil is rich, and finely wooded. Area, 56,243 square miles. Pop. 1,636,937. **Lan'sing** is the state-capital. Pop. 8319.

Mid'dletown, a town of Connecticut, on the Connecticut. Pop. 11,731.

Milwau'kee, a flourishing commercial town of Wisconsin, United States; it is situated on a river of the same name, near its entrance into Lake Michigan. Pop. 115,587.

Minneso'ta, one of the United States. It is bounded on the N. by British America; E. by Lake Superior and Wisconsin; S. by Iowa; and W. by Dakota. Area, 95,274 square miles. Pop. 780,773. **St Paul**, on the Mississippi, is the state-capital. Pop. 41,473.

Miramichi, *mir-am-e-she'*, a large river of New Brunswick noted for the extensive forests on its banks, whence large shipments of timber are made. After a course of 220 miles, it falls into a bay of the same name.

Mississip'pi River. *See* REMARKS, page 349.

Missis'sippi, one of the United States, bounded on the W. by the great river of the same name, which divides it from Louisiana and Arkansas; on the E. by Alabama; on the N. by Tennessee; and on the S. by Louisiana and the Gulf of Mexico. Though liable to inundation, the soil in general is rich, producing corn, cotton, and tobacco. Area, 47,156 square miles. Pop. 1,131,597. **Jack'son**, on Pearl River, is the state-capital. Pop. 5205.

Missou'ri, River. *See* REMARKS, page 349.

Missou'ri, one of the United States, lying on both sides of the Missouri, and bounded on the E. by the Mississippi, which separates it from Illinois and Kentucky; on the N. by Iowa; on the W. by Nebraska, Kansas, and the Indian Territory; and on the S. by Arkansas. It possesses a fertile soil, and abounds in lead. Area, 67,380 square miles. Pop. 2,168,380. **Jef'ferson City**, on the Missouri, is the state-capital. Pop. 5271.

Mistas'sin, a lake of British America, to the N. of the province of Quebec. It is above 250 miles in circuit, is surrounded by mountains, and discharges its waters by the Rupert into James Bay.

Mobile, *mo-beel'*, the principal seaport of Alabama, United States, situated on the Mobile River. P. 31,205.

Montan'a, a territory of the United States, bounded N. by British America; E. by Dakota; S. by Wyoming and Idaho; W. by Idaho. The surface of the country is mountainous, the soil rich, and the climate invigorating. Area, about 153,000 square miles. Pop. 39,159. The capital is **Virginia City**, on a tributary of the Jefferson River.

Monte'go Bay, a seaport of Jamaica, on the N.W. side of the island. Pop. 4000.—18, 29 N. 77, 56 W.

Mon'terey, a city of Mexico, capital of the department of New Leon, on the Fernando. Pop. 35,462.—Also, a seaport of Upper California, on Monterey Bay. Pop. 1396.

Mon'te Vid'eo (the prospect hill), the capital of Uruguay, on the Rio de la Plata. It exports large quantities of hides and dried beef. Pop. 92,000.

Montgom'ery, a flourishing city of the United States, capital of Alabama. It is situated on the left bank of the Alabama River, and possesses great facilities for communication with the

surrounding country. It was in this city that the representatives of the states of South Carolina, Georgia, Alabama, Florida, Mississippi, and Louisiana, assembled, 9th February 1861, and declared themselves independent of the United States—taking, at the same time, the name of "The Confederated States of America." The population of Montgomery is 16,713.

Montreal′ (the royal mount or hill), a city of Quebec, Dominion of Canada, situated on the S.E. side of the island of Montreal, at the confluence of the St Lawrence and the Ottawa. It has a thriving trade. The tubular bridge here, which carries the Grand Trunk Railway over the St Lawrence, is 1¼ mile in length. Pop. 140,747.

Montserrat′, a British West India island, 12 miles long and 7 miles broad. Area, 47 square miles. Pop. 8693. **Plym′outh** is the capital.

Morelia, *mo-rel′ya*, a city of Mexico, capital of the department of Michoacan. Pop. 38,549.

Mosqui′tia, or **Mosquito Territory**, a maritime district of Central America, extending along the coast from Cape Honduras to the River San Juan. **Grey Town**, at the mouth of the San Juan, is the chief town.

Mountpleas′ant, a town of New York, situated on the Hudson, with a state-prison for the reformation of criminals. Pop. 5410.

Nain, a town on the coast of Labrador, with a Moravian settlement.

Nantuck′et, a town of Massachusetts, United States, on an island of the same name, 16 miles in length, with an average of 4 miles in breadth. Pop. 3726.—41, 17 N. 70, 6 W.

Nassau′. *See* **Bahamas**.

Natal′, a seaport of Brazil, the capital of the province of Rio Grande do Norte, on the Atlantic; it has considerable exports of Brazil-wood. Pop. 10,000.—5, 4 S. 35, 15 W.

Natch′ez, an important town of Mississippi, United States, situated on the River Mississippi. Pop. 7058.

Nebras′ka, one of the United States, W. of the Missouri, having Kansas and Colorado on the S.; Wyoming on the W.; Dakota on the N.; and Iowa and Missouri on the E. Area, 122,007 square miles. Pop. 452,402. **Omaha** is the state-capital. Pop. 80,518.

Nel′son, a river of the Dominion of Canada, which issues from Lake Winnipeg, and falls into Hudson Bay.

Neva′da, one of the United States, immediately W. of Utah and E. of California. Area, 83,500 square miles. Pop. 62,266. **Carson City** is the state-capital. Pop. 4229.

Ne′vis, a British West India island, Leeward group, 7 miles long and 6 miles broad, separated from St Christopher by a narrow channel. Area, 20 square miles. Pop. 11,680. **Charles′ton** is the capital. Pop. 1806.

New Al′bany, a town of Indiana, United States, on the Ohio; it has considerable trade. Pop. 16,423.

New′ark, the principal town of New Jersey, United States, beautifully situated at the head of a bay, 9 miles from New York. Pop. 136,508.

New Bed′ford, a seaport of Massachusetts, United States. Pop. 26,875.

New Bruns′wick, a province of the Dominion of Canada, to the N.W. of Nova Scotia, and E. of the United States. The greater part of it is covered with forests, intersected by numerous rivers and lakes. Area, 27,700 square miles. Pop. 321,233.

New Bruns′wick, a town of New Jersey, United States, on the Raritan. Pop. 17,166.

New′buryport, a seaport of Massachusetts, United States, near the mouth of the Merrimac, over which there is here an iron suspension bridge 244 feet long. Pop. 13,537.

Newfoundland′, a large island of British North America, not included in the Dominion of Canada, situated near the entrance of the Gulf of St Lawrence, and separated from the coast of Labrador by the Strait of Belleisle It is chiefly valuable for the great cod-fishery on its banks and along its shores. Dense fogs render the climate particularly unpleasant. Area, 40,200 square miles. Pop. 161,874.

New Hamp′shire, one of the United States, bounded E. by Maine, and W. by the River Connecticut, which separates it from Vermont. Although principally devoted to agriculture, its trade, manufactures, and fishery are considerable. Area, 9280 square miles. Pop. 316,991. **Con′cord**, on the Merrimac, is the state-capital. Pop. 13,838.

Newha′ven, a seaport of Connecticut, United States, situated at the head of Newhaven Bay, an inlet of Long Island Sound. It contains Yale College, a flourishing seminary, and has a good trade. Pop. 62,882.—41, 18 N. 72, 57 W.

New Jer′sey, one of the United

States, bounded on the E. by the Atlantic, and on the other sides by New York, Pennsylvania, and Delaware. The soil is various; it has thriving manufactures. Area, 8320 square miles. Pop. 1,131,116. **Trenton**, on the Delaware, is the state-capital. Pop. 29,910. Jersey City has a population of 120,722.

New Lon'don, a town of Connecticut, United States, on the Thames, with considerable trade. Pop. 10,557.—41, 22 N. 72, 5 W.

New Mex'ico, formerly, as its name implies, a part of Mexico, but erected into a territory of the United States in 1850. It is bounded on the W. by Arizona; on the E. by Texas and the Indian Territory; on the S. by Texas and Mexico; and on the N. by Colorado. Area, 243,063 square miles. Pop. 119,565. **San'ta Fé** is the state-capital. Pop. 6635.

New Or'leans, the state-capital of Louisiana, United States, situated on the Mississippi, about 105 miles from its mouth, with an extensive foreign trade. It is built on low marshy ground, and is very unhealthy. Pop. 216,090.

New'port, a seaport in Rhode Island, United States, with a fine harbour and considerable trade. It is one of the two state-capitals of Rhode Island. Pop. 15,693.—41, 30 N. 71, 10 W.

New Prov'idence. *See* **Bahamas.**

New West'minster, a city on the Frazer River, British Columbia. Pop. 4003.

New York, the most populous and most important of the United States, bounded N. and W. by the St Lawrence and Lakes Ontario and Erie; S. by Pennsylvania and New Jersey; and E. by Vermont, Massachusetts, and Connecticut. Its aspect and soil are equally various. It has a great extent of inland navigation, and its trade and manufactures are flourishing. Area, 47,000 square miles. Pop, 5,082,871. **Al'bany** is the state-capital. Pop 90,758.

New York, the commercial capital of the United States, situated on the S. extremity of Manhattan Island, at the mouth of the Hudson. Many of its public buildings are elegant, and it is distinguished for the number of its benevolent and literary institutions. Its situation and excellent harbour have rendered it the greatest emporium of the New World. Pop. 1,206,299.—40, 42 N. 74, 1 W. *See* REMARKS, page 351.

Niag'ara, River, issues from Lake Erie, and falls into Lake Ontario. It is 35 miles long; its breadth varies from half a mile to a mile and a half. Its cataracts are stupendous: the volume of water precipitated being, it is computed, 100 millions of tons per hour. The fall on the Canadian side is the Great, or, as it is called from its forming a crescent, the Horse-shoe Fall; here the stream, 2100 feet broad, is precipitated over a height of 150 feet. The other, on the United States side, is 1140 feet wide and 162 feet high. A cable suspension bridge of 800 feet span has been erected on the river a little below the cataract.

Niag'ara, a town of New York, United States, defended by a fort. It is in the neighbourhood of the Falls of Niagara. Pop. 3320.

Nicarag'ua, a state in Central America, between the state of Honduras on the N., and that of Costa Rica on the S. Area, 58,167 square miles. Pop. 300,000. **Managua** is the capital. Pop. 15,000.

Nicarag'ua, a town in Central America, on the S.W. shore of the lake of the same name. Pop. 8000.—11, 28 N. 85, 47 W.

Nicaragua, Lake, a sheet of water, covering an area of 3668 square miles, in the state of Nicaragua, Central America. It is 110 miles in length, and its average breadth is 35 miles. It has a depth of 15 fathoms, and is therefore adapted for vessels of a large size. It has long been contemplated to establish a water communication between the Atlantic and Pacific Oceans by means of this lake, the River San Juan, its outlet, and a ship canal cut through the isthmus between the lake and the Pacific.

Noot'ka Sound, a bay of the W. coast of Vancouver Island.

Nor'folk, a seaport of Virginia, United States, on Elizabeth River. Its trade is considerable. Pop. 21,966.

North-West Territories, a portion of the Dominion of Canada, N. of British Columbia and Athabasca.

Norwich, *nor'rij*, a town of Connecticut, United States. Pop. 21,141.

No'va Sco'tia, a province (with Cape Breton Island) of the Dominion of Canada, connected with New Brunswick by a narrow isthmus 16 miles across, and separated from Cape Breton Island by the Gut of Canso. Although

the soil is in general sterile, there are many fertile districts. It has rich mines of coal and iron. Fish, coal, and timber are the chief articles of export. Area, 18,671 square miles. Pop. 440,572.

Oax'aca, a city of Mexico, the capital of the department of the same name on the Rio Verde. Pop. 26,228. —17, 8 N. 97, 16 W.

Ohi'o, one of the United States, bounded by Michigan and Lake Erie on the N.; by Pennsylvania and Virginia on the E.; by Kentucky o the S.; and by Indiana on the W. In point of beauty, fertility, and climate, it is one of the finest states of the Union. Area, 39,964 square miles. Pop. 3,198,062. **Colum'bus** is the state-capital. Pop. 51,617.

Ohi'o, a large river of the United States; it is formed by the union of the Alleghany and the Monongahela at Pittsburg, and, after a S.W. course of 1033 miles, joins the Mississippi 160 miles below the influx of the Missouri.

O'maha, a town of Nebraska, United States. It is pleasantly situated on the W. bank of the Missouri, and forms one of the principal stations of the Union Pacific Railway. Pop. 30.518.

Ontario, *on-tā'rē-o*, a province of the Dominion of Canada, W. and S.W. of Quebec, and S. of Albany River and James Bay. Its length is about 750 miles, and its greatest breadth about 700 miles. Area, 101,733 square miles. The surface is gently undulating and diversified with lakes and rivers. The lakes are numerous and magnificent. They cover an area of 80,000 square miles, and contain nearly half the fresh water of the globe. The soil possesses great fertility, and immense crops of wheat and other cereals are annually raised. The mineral wealth is very considerable, copper, silver, iron, zinc, lead, cobalt, and marbles of almost every colour being found. The climate is extreme, but is agreeably tempered by the proximity of the lakes. Pop. 1,923,228.

Onta'rio, the most easterly of the great American lakes, is 180 miles in length by 65 miles in breadth, and is of great depth. It receives the waters of Lake Erie by the Niagara, and discharges them by the St Lawrence. Steam-vessels constantly ply between the British and American sides. The country along its shores is rich and well wooded.

Or'egon, one of the United States, is situated between the Rocky Mountains and the Pacific Ocean, having California and Nevada on the S., Washington on the N., and Idaho on the E. Area, 102,606 square miles. Pop. 174,768. **Salem** is the state-capital. Pop. 2538.

Orino'co. *See* REMARKS, page 359.

Oriza'ba, a town of Mexico, near the volcanic Peak of Orizaba. Pop. 14,161.—18, 25 N. 96, 35 W.

Otav'alo, a town of Ecuador, 40 miles N. of Quito. It was ruined by an earthquake in 1868.

Ot'tawa, province of Ontario, the seat of government of the Dominion of Canada, situated at the junction of the Rideau Canal with the River Ottawa. Pop. 27,412.

Ot'tawa, a river of British America; it forms the principal boundary between the provinces of Ontario and Quebec, and enters the St Lawrence above the island of Montreal, after a course of 800 miles.

Ou'ro Pre'to (formerly **Villa Rica**), a city of Brazil, the capital of the province of Minas Geraes.

Panama', or **Da'rien, Isthmus of**, a narrow neck of land, in the N.W. of Colombia, uniting North and South America. It extends 360 miles, in the form of a crescent, round the Bay of Panama. Its general breadth is about 40 miles; but, where narrowest, it is not more than 28 miles. A railway from Aspinwall to Panama, about 50 miles in length, connects the coasts of the Atlantic and Pacific Oceans.

Panama', a state and seaport city of the republic of Colombia, on the bay of the same name. The city stands at the southern terminus of the railway across the isthmus. Pop. 18,378.

Pa'ra, a city and seaport of Brazil, the capital of the province of the same name, situated on the estuary of the Para. Its chief exports are cotton, cocoa, rice, and drugs. Pop. 25,000.—1, 28 S. 48, 30 W.

Pa'ra, a river of Brazil, formed by the union of the Tocantins and the Araguay; it falls into the Atlantic to the S. of the Amazon.

Par'aguay. *See* page 366.

Par'aguay River, rises in Brazil, and flows S. 1200 miles, forming the E. boundary of Bolivia, and also of the Argentine Republic, till it joins the Parana.

Parahy'ba, a seaport of Brazil, the capital of the province of the same

name, near the mouth of the Parahyba. Pop. 15,000.—7, 5 S. 35, 4 W.

Para'na, a town of the Argentine Republic, on the E. bank of the River Parana, opposite Santa Fè. Pop. 7000.

Para'na River, has its source in the mountains of Brazil; flowing S.W., it receives the Paraguay, and, near Buenos Ayres, unites with the Uruguay to form the River Plata.

Pa'ria, Gulf of, an inlet of the Caribbean Sea, between the coast of Venezuela and the island of Trinidad.

Parima, Sierra, *se-er'ra pā-re'mā*, a mountain system in Venezuela. *Mount Maravaca*, its principal summit, is supposed to rise 10,500 feet above the sea.

Par'ry, or North Georgian Islands, a group in the Arctic Ocean, to the N. of Melville Sound.

Pas'co, a mining town of Peru, the highest city in the world, being 13,720 feet above the sea. Its silver-mines are believed to be the richest anywhere wrought. Pop. 12,000.

Pascua'ro, a town of Mexico, beautifully situated near the E. shore of the lake of the same name. Pop. 11,632.

Patago'nia, an extensive region in South America, divided now between Chili and the Argentine Republic.

Pat'erson, a town of New Jersey, United States, 14 miles from New York; it has great cotton manufactures. Pop. 51,031.

Pa'tos, a lake or lagoon in the south of Brazil, communicating with the lake of Mirim, and, by the Rio Grande, with the Atlantic.

Pearl Islands, a group belonging to Colombia, South America, in the Bay of Panama; they were so called from a pearl fishery carried on there.

Pennsylva'nia, one of the United States, and, next to New York, the most important in the Union, is bounded N. by New York and Lake Erie; E. by New York and New Jersey; S. by Delaware, Maryland, and Virginia; and W. by Ohio With a soil generally rich, it abounds in coal and iron; while its trade and manufactures are extensive and flourishing. Area, 46,000 square miles. Pop. 4,282,891. **Har'risburg**, on the Susquehannah, is the state-capital Pop. 30,762.

Penob'scot, a river of Maine, United States, which flows into Penobscot Bay.

Pensaco'la, a seaport of Florida United States, on a bay of the Gulf of Mexico. Pop. 6845.

Pernambu'co, or more correctly **Recife**, *rā-see'fā*, a seaport of Brazil, the capital of the province of the same name. It consists of four towns—Olinda, Recife, San Antonio, and Boa Vista—and has an extensive trade in sugar, cotton, and hides. Pop. 117,000. —8, 3 S. 34, 52 W.

Peru'. *See* page 361.

Pe'tersburg, a town of Virginia, United States, on the Appomattox. It was one of the most strongly fortified places held by the Confederates, and was several times attacked by the Federals under General Grant and others, who were always repulsed with great loss, until the decisive battle of April 1, 2, 1865, when the Confederates, under General Lee, were, after a severe and bloody contest, defeated by Grant's army, which entered Petersburg and Richmond the next day. The fall of these two most important strongholds was soon followed by the total collapse of the rebellion. Pop. 21,656.—37, 13 N. 77, 20 W.

Philadel'phia, the principal city of Pennsylvania, United States, situated on the Delaware, near its junction with the Schuylkill, 120 miles from the Atlantic. It has a flourishing university, and several literary and scientific institutions. Pop. 847,170.—39, 57 N. 75, 10 W.

Pichin'cha, a volcanic mountain of Ecuador, 11 miles W.N.W. of the city of Quito. It is 15,924 feet high.

Pictou', a seaport of Nova Scotia, on its N. coast, with a safe and capacious harbour. Pop. 3403.

Pitts'burg, a city of Pennsylvania, United States, situated at the point where the Alleghany and Monongahela unite in forming the Ohio. It has large ironworks and other manufactures. Pop. 156,389.—40, 28 N. 80, 0 W.

Platte, *plat*, or **Nebras'ka**, a river of the United States, which has its source near that of the Arkansas, and, flowing eastward, joins the Missouri, after a course of about 600 miles.

Plymouth, *plim'uth*, the earliest settled seaport of Massachusetts, United States. Pop. 7094.—41, 53 N. 70, 40 W.

Pontchartrain', Lake, in Louisiana, United States; it is 45 miles long and 20 miles broad, and communicates both with the Gulf of Mexico and with the Mississippi.

Popayan', the capital of the state

of Cauca, in Colombia, South America. It was formerly a place of great importance. Pop. 8485.

Port-au-Prince, the capital city of the Republic of Hayti, at the head of the Bay of Gonaives. Pop. 20,000.—18, 35 N. 72, 18 W.

Port Hope, a town of Ontario, Canada, beautifully situated on the N. shore of Lake Ontario. Pop. 5585.

Port'land, the principal city and seaport of Maine, United States, on Casco Bay. Its foreign trade is considerable. Pop. 33,810.—Also the most populous city of Oregon, United States; it is situated on the left bank of the Willamette River, 12 miles from its mouth, and is one of the two termini of the N. Pacific Railway. Pop. 17,577.

Por'to Ale'gre, a town of Brazil, the capital of the province of Rio Grande do Sul, situated at the N. end of Lake Patos. Pop. 20,000.—30, 0 S. 51, 20 W.

Port of Spain. *See* **Trinidad, Island of.**

Por'to Ri'co (*Span.* **Puerto Rico**), one of the Greater Antilles, West Indies, belonging to Spain, lies to the E. of Hayti. Its length is 100 miles; its breadth 40 miles. It is very fertile, has fine woods and pastures, and is the centre of an extensive commerce. Pop. 754,313. **San Ju'an**, on the N. coast, is the capital. Pop. 15,400.—18, 29 N. 66, 6 W.

Port Royal, a fortified seaport of the Island of Jamaica. It is a station for ships of war, and contains an arsenal and a dockyard. Pop. 15,000. —17, 56 N. 76, 51 W.

Ports'mouth, a city and seaport of New Hampshire, United States, strongly fortified with an excellent harbour. Pop. 9690.—43, 4 N. 70, 45 W.

Poto'mac, a river of the United States, which rises in the Alleghany Mountains, and, after forming the boundary between Maryland and Virginia, flows into Chesapeake Bay.

Potosi, *po-tō-see'*, a city of Bolivia, the capital of the province of the same name; it is, next to Pasco, in Peru, probably the most elevated city in the world, being situated 13,330 feet above the sea, on the side of a conical mountain celebrated for its silver-mines. Pop. 22,850.—19, 35 S. 65, 20 W.

Poyais, *pwā'yā*, a district of Central America, on the Honduras or Mosquito coast.

Prince Ed'ward Island, a province of the Dominion of Canada; it is situated in the Gulf of St Lawrence, and is separated from New Brunswick and Nova Scotia by Northumberland Strait. It is about 135 miles in length by 18 miles in mean breadth. It is deeply indented by bays, and is favourably situated both for agriculture and for fisheries. Area, 2173 square miles. Pop. 108,891. **Char'lottetown** is the capital. Pop. 11,485.

Prince of Wales, Cape, the western extremity of North America, separated by Behring Strait from East Cape in Asia.—66, 0 N. 167, 59 W.

Prince Re'gent Inlet, British America, connecting Barrow Strait with Boothia Gulf.

Prince William Sound, a gulf of the Pacific, on the S. coast of Alaska.

Prov'idence, a flourishing city and seaport, and one of the two state-capitals of Rhode Island, United States, situated on both sides of the river of the same name. Pop. 104,857. —41, 50 N. 71, 22 W.

Pueb'la, a city of Mexico, the capital of the department of the same name. Pop. 72,029.—19, 3 N. 98, 4 W.

Puer'to Bel'lo (the beautiful harbour), a seaport of Colombia, South America, on the N. coast of the Isthmus of Panama. It has a fine port, but is very unhealthy. Pop. 1300.—9, 35 N. 79, 40 W.

Puer'to Cabello, *kā-bel'yo*, a seaport of Venezuela, on an island in a gulf of the Caribbean Sea. Pop. 7500.

Puer'to Prin'cipè, a town of Cuba, the capital of the central province of the island. Pop. 30,685.—21, 14 N. 77, 30 W.

Pu'no, a town of Peru, the capital of a district once rich in mines of silver, on the west shore of Lake Titicaca. Next to Pasco and Potosi, it is the highest town in the world, being 12,870 feet above the sea. Pop. 9000.—15, 50 S. 70, 22 W.

Quebec', a province of the Dominion of Canada, bounded N. by Labrador and Hudson Bay; W. and S.W. by the River Ottawa and the province of Ontario; S. by the United States and New Brunswick; and E. by the Gulf of St Lawrence and Labrador. Area, 188,688 square miles. The country is characterized by picturesque scenery. The soil is in general rich. The province is richly endowed with minerals, gold, silver, copper, lead, iron, zinc, platinum, etc., being found. The climate, although subject to great ex-

tremes of heat and cold, is healthy. The chief occupation is agriculture, and the felling of trees for export. The inhabitants are very generally French—the descendants of the settlers in Canada prior to its being obtained by Britain in 1763. The prevailing religion is Roman Catholic. Pop. 1,359,027.

Quebec', the capital of the above province, on the N. bank of the River St Lawrence, about 400 miles from its mouth. It is very strongly fortified, and has an extensive trade. In 1759, it was taken from the French by the British under General Wolfe, who fell in the moment of victory. Pop. 62,446. —46, 49 N. 71, 13 W.

Queen Char'lotte Island, a British island on the N.W. coast, about 150 miles in length and 60 miles broad. It is hilly and well wooded.

Quereta'ro, a city of Mexico, the capital of the department of the same name, noted for the beauty of its edifices and its manufactures of woollen cloth. It was here that the Emperor Maximilian was shot, on 19th June 1867. Pop. 34,383.—20, 36 N. 100, 10 W.

Quito, *kee'to,* the capital of Ecuador, in a ravine on the E. slope of the volcanic mountain Pichincha, 9513 feet above the sea. The climate is that of perpetual spring; but the situation of the town renders it peculiarly exposed to destructive earthquakes. Pop. variously estimated at from 25,000 to 50,000.—0, 14 S. 78, 48 W.

Race, Cape, the S.E. extremity of Newfoundland.—46, 30 N. 54, 5 W.

Rae, Cape, the S.W. extremity of Newfoundland.—47, 30 N. 59, 30 W.

Read'ing, a town of Pennsylvania, United States, on the Schuylkill, with considerable trade and manufactures. Pop. 43,278.

Recife. *See* **Pernambuco.**

Red River, or **Ri'o Rox'o,** rises near the Rocky Mountains, in New Mexico, and, after a S.E. course of 1500 miles, joins the Mississippi about 240 miles above New Orleans.—Also a river which rises in Minnesota, in the United States, and, flowing northwards, falls into Lake Winnipeg, Dominion of Canada.

Rhode Island, one of the United States, the smallest in the Union, between Connecticut and Massachusetts. It is celebrated for its orchards and dairy produce. Area, 1306 square miles. Pop. 276,531. **Providence** and **Newport** are the state-capitals. Pop. of Providence, 104,857; of Newport, 15,693.

Rich'mond, the picturesquely-placed capital of Virginia, United States, on James River, about 150 miles from its mouth. It was the seat of the Confederate government during the civil war. Pop. 63,600.—37, 32 N. 77, 23 W.

Rideau, *re-dō',* a canal in Ontario, Canada, extending from Kingston, on Lake Ontario, to the Ottawa, a distance of 132 miles.

Riobam'ba, Nuevo, *nwā'vo re-o-bam'bā,* a town of Ecuador, in the province of Quito; near it are mines of gold and silver. Pop. 20,000.—1, 38 S. 78, 49 W.

Ri'o Colora'do (the ruddy river), a river which rises in the Andes of Chili, flows S.E. through the pampas of the Argentine Republic, and falls into the Atlantic near 40 S. lat.

Ri'o Colora'do, a river which rises in the Rocky Mountains, and, after a S.W. course of 700 miles, falls into the Gulf of California.—A river of Texas, which rises in the Rocky Mountains and flows into the Gulf of Mexico.

Ri'o de Janei'ro, generally called **Rio,** the capital of Brazil, and the largest and most important commercial city of South America. It is beautifully situated on a noble bay studded with more than a hundred islands, and has one of the finest harbours in the world, defended by a citadel and several forts. Its principal exports are sugar, coffee, cotton, hides, drugs, cabinet and dye woods, gold, diamonds, and precious stones. The trade is chiefly in the hands of the British. Pop. 275,000.—22, 54 S. 43, 15 W.

Ri'o de la Pla'ta. *See* REMARKS, page 365.

Ri'o Grande del Nor'te, a river which rises in the Rocky Mountains, and, flowing S.E., forms the boundary between Mexico and Texas, and falls into the Gulf of Mexico.

Ri'o Grande, or **San Pe'dro,** a seaport of Brazil, in the province of Rio Grande, at the outlet of Lake Patos; it is a place of considerable trade. Pop. 3590.—32, 7 S. 52, 8 W.

Rio Ha'cha, a small seaport of Colombia, South America, at the mouth of the Hacha, on the Caribbean Sea.

Ri'o Ne'gro (black river), a river of Brazil, has its source in Colombia, and joins the Amazon after a course estimated at 1300 miles.

Roch'ester, a city of New York, United States, on the Erie Canal, at the Falls of the Genesee, with a great trade in wheat and flour. Pop. 89,366. —43, 8 N. 77, 51 W.

Rock'y Mountains. *See* REMARKS, page 349.

Rosa'rio, one of the chief commercial towns of the Argentine Republic; it is situated in the province of Santa Fè, 230 miles N.W. of Buenos Ayres, on the W. bank of the Parana. Pop. 23,200.

Sa'ba, a Dutch West India Island, N.W. of St Eustatius. Pop. 2149.

Sa'ble, Cape, the S.W. point of Nova Scotia.—43, 24 N. 66, 3 W.—Also the S. extremity of Florida, United States.—25, 5 N. 81, 8 W.

Sack'ett's Harbour, a town of New York, United States, on the shore of Lake Ontario. Pop. 885.—43, 55 N. 76, 30 W.

Sacramen'to, a city of the state of California, on the River Sacramento. Pop. 21,420.

St Anto'nio, a cape of Buenos Ayres, at the south entrance of the Rio de la Plata.—36, 20 S. 56, 46 W.

St Augustine, *aw'gus-teen*, a city and port of entry of Florida. It is the oldest town in the United States, having been founded by the Spaniards about 1565. Pop. 2293.—29, 51 N. 81, 30 W.

St Bartho'lomew, one of the West India Islands, belonging to France, 24 miles in circuit. Pop. 2835. **Gusta'via** is the capital.

St Cath'arine's, a city of Ontario, Canada, situated on the Welland Canal, celebrated for its medicinal waters. Pop. 9631.

St Chris'topher, or St Kitts, one of the British West India Islands, Leeward group, 72 miles in circuit. Its principal exports are sugar, molasses, and rum. Area, 68 square miles. Pop 29,137. **Basse-Terre** is the capital. Pop. 8500.—17, 17 N. 62, 48 W.

St Croix', *saint kroi*, a river separating New Brunswick from the United States.—Also, one of the West India Islands belonging to Denmark. Pop. 33,763.

St Eli'as, a lofty mountain on the N.W. coast, rising to the height of 14,970 feet above the level of the sea.

St Eusta'tius, one of the Dutch West India Islands, N.W. of St Christopher. Pop. 2063. **St Eustatius** is the capital.

St John, one of the West India Islands, belonging to Denmark, 12 miles in circuit. Pop. 1054.

St John, the principal seaport of New Brunswick, on the Bay of Fundy, at the mouth of the river St John, which has a course of nearly 600 miles. Pop. 26,127.—45, 15 N. 66, 3 W.

St John's, the chief town of Newfoundland, on the S.E. coast. It is strongly fortified, and has a great trade in the cod-fishery. Pop. 22,553. —47, 33 N. 52, 44 W.

St Kitts. *See* **St Christopher.**

St Law'rence, one of the largest rivers of North America, issues from Lake Superior, and, passing through Lakes Huron, Erie, and Ontario, falls into the Atlantic after a course of 2150 miles. It has various names in its course, and is first called St Lawrence after passing Montreal. It is 90 miles wide at its mouth.

St Law'rence, Gulf of, a large bay of the Atlantic; its principal entrance, from the ocean, is between Cape Breton and Newfoundland.

St Lou'is, the principal town of Missouri, United States, situated on the Mississippi, 18 miles below the influx of the Missouri. Pop. 350,518.

St Lu'cas, a cape of Mexico, the southern extremity of Lower California.—22, 52 N. 109, 50 W.

St Lucia, *loo-see'a*, one of the British West India Islands, between Martinique and St Vincent; it is 32 miles long and 12 miles broad. Pop. 38,551. **Cas'tries** is the capital. Pop. 4300.

St Mari'a, a cape of Uruguay, to the E. of Monte Video.—34, 35 S. 54, 20 W.

St Mar'tin, one of the West India Islands. Pop. 6607.

St Peter's, a river of the United States, which flows into the Mississippi a few miles below the Falls of St Anthony.

St Pierre, *sang pe-air'*, the principal commercial town and seaport of Martinique, West Indies. Pop. 23,755.

St Roque, *rok* or *ro'kā*, a prominent cape on the coast of Brazil.—5, 3 S. 35, 33 W.

St Sal'vador, or Guanaha'ni Island. *See* **Bahamas.**

St Thom'as, one of the Virgin Islands, belonging to Denmark. Pop. 14,007. **St Thomas** is the capital. Pop. 11,681.

St Vincent, one of the British West India Islands, 18 miles long and 11 broad. Area, 130 square miles. Pop. 35,688. **Kings'ton** is the capital. Pop. 5400.

Saintes, Les, *lā sengt,* three small French West India Islands, between Guadeloupe and Dominica. Pop. 1686.

Sa'lem, a city and port of entry of Massachusetts, United States. Pop. 27,563.—42, 31 N. 70, 54 W.—Also the capital of Oregon. Pop. 2538.

Sal'ta, a town of the Argentine Republic, the capital of a province of the same name. Pop. 11,700.

Saltil'lo, a city oi Mexico, capital of the department of Cohahuila. Pop. 18,487.

Salt Lake City, in Utah Territory, United States; it is the headquarters of the Mormons or Latter-Day Saints. Pop. 20,768.

San'dy-Hook, a sandy beach or peninsula of New Jersey, United States, 7 miles S.W. of Long Island.

San Blas, a seaport of Mexico, on an island at the mouth of the Santiago, in the Pacific. Pop. 3518.—21, 32 N. 105, 15 W.

San Domingo, Island of. *See* **Hayti.**

San Domingo, the capital of the Dominican Republic, island of Hayti, on its S.E. coast. Pop. 16,000.—18, 29 N. 69, 59 W.

San Francis'co, a city and seaport of the state of California, on an extensive bay. Pop. 233,956.—37, 47 N. 122, 24 W.

San Francis'co, a river of Brazil, which rises in the S. of the province of Minas Geraes, and, after a circuitous N.E. course of 1500 miles, falls into the Atlantic.

San Jo'sè, a city in Central America, the capital of the state of Costa Rica. Pop. 25,000.—Also a town of the state of California. Pop. 12,567.

San Ju'an Bautis'ta, a town of Mexico, capital of the department of Tabasco. Pop. 18,524.

San Juan, *hoo'an* (St John), a town of the Argentine Republic, at the foot of the Andes: near it are gold-mines. Pop. 15,000.—31, 6 S. 69, 6 W.

San Ju'an. *See* **Porto Rico.**

San Ju'an, a river of Central America, forming the outlet of the waters of the Lake of Nicaragua into the Caribbean Sea at Port San Juan.

San Lu'is Poto'si, a city of Mexico, the capital of the department of the same name. Pop. 69,900.

San Pau'lo (St Paul), a city of Brazil, the capital of the province of the same name. Pop. 40,000.—23, 30 S. 46, 40 W.

San Sal'vador, a state in Central America, between the states of Gautemala and Nicaragua. Area, 7335 square miles. Pop. 554,785.—**New San Salvador,** on a plateau 2000 feet high, is now the capital, the old capital having been destroyed by an earthquake in 1854.

San'ta Cruz, or **St Croix,** *seng krwa,* one of the Virgin Islands, West Indies, belonging to Denmark; it is 20 miles long and 6 miles broad. Pop. 33,763. **Chris'tiansted** is the capital. Pop. 9774.

San'ta Cruz de la Sier'ra, a city of Bolivia, the capital of the province of the same name, situated in an extensive plain. Pop. 9780.

San'ta Fé, the capital of New Mexico. United States. Pop. 6635.

San'ta Fè, a town of the Argentine Republic, on the Salado, the capital of a province of the same name. Pop. 12,000.

San'ta Mar'ta (St Martha), a seaport of Colombia, South America, the capital of the province of Magdalena, on the Caribbean Sea. Pop. 6000.

Santa'rem, a town of Brazil, in the province of Para, on the Tapajos, at its confluence with the Amazon. Pop. 10,000.

Santia'go, the capital of Chili, situated on the Maypocho, in a richly wooded plain, 60 miles S.E. of Valparaiso, its port, with which it is connected by a railway. It is the seat of a university. Pop. 387,000.—33, 26 S. 70, 40 W.

Santia'go, a maritime city of Cuba, on the S.E. side of the island. Pop. 45,000.

Saskatch'ewan (swift current), a river of British North America, rises in the Rocky Mountains, and falls into Lake Winnipeg.—Also the name of a province of the Dominion of Canada, formed out of the North-Western Territories in 1882. It lies to the E. of Alberta and to the N. of Assiniboia and Manitoba, and has an area of 114,000 square miles.—Next to **Prince Albert,** the capital, **Battleford** and **Carleton** are the most important places.

Savan'nah, a river of the United States, forming the boundary between Georgia and South Carolina, and falling into the Atlantic.

Savan'nah, the principal seaport of Georgia, United States, on the Savannah. Pop. 30,709.

Scran'ton, a town of Pennsylvania, United States, on the Lackawanna River. Pop. 45,850.

Sit'ka, capital of the United States territory of Alaska. Pop. 1000.

Socor'ro, a town of Colombia, South America, the capital of a province, on a tributary of the Magdalena. Pop. 12,000.—6, 30 N. 73, 40 W.

Sono'ra, a town of Mexico, in the dep. of the same name. Pop. 8000.

South Geor'gia, a barren, uninhabited island in the S. Atlantic, E. of the Falkland Islands, claimed by Great Britain.—54, 30 S. 37 W.

South Shet'lands, a cluster of islands, situated in 63 S. lat., to the south of Cape Horn. To the east is a smaller group, called the South Orkneys.

Spanish Town, a town of Jamaica, and formerly the seat of government. Pop. 6000.

Springfield, a city of Massachusetts, United States, on the Connecticut. Pop. 33,340.

Sta'ten Island, belonging to New York, United States, 14 miles long and 5 miles broad, and divided from Long Island by the Narrows Strait.

Sta'ten, a rocky island off the S.E. coast of Tierra del Fuego, from which it it is separated by the Strait of Le Maire.

Sucre. *See* **Chuquisaca.**

Supe'rior, Lake, the largest of the great American lakes, and the greatest body of fresh water on the globe. Its length is 355 miles, its breadth 160 miles; its mean depth is 988 feet; its surface is 630 feet above the level of the sea. It has numerous islands; it receives 220 rivers and streams, and discharges its waters by St Mary Strait into Lake Huron.

Surinam', a district of Guiana, South America, belonging to the Dutch; it lies between British and French Guiana, and is traversed by several rivers. Area, 60,000 square miles. Pop. 63,825.—**Parama'ribo**, the capital, is situated on the River Surinam, 16 miles from its mouth. Pop. 22,000.

Susquehan'nah, a river of the United States, which has its source in Lake Otsego, flows through Pennsylvania, and enters the head of Chesapeake Bay.

Syr'acuse, a town of New York, United States, celebrated for the manufacture of salt. Pop. 51,792.

Tampi'co, a seaport of Mexico, on the Gulf of Mexico. Pop. 11,682.—22, 15 N. 97, 52 W.

Taun'ton, a manufacturing town of Massachusetts, United States, on the Taunton. Pop. 21,213.

Tegucigal'pa, the capital of the state of Honduras, Central America; it is situated 40 miles S.E. of Comayagua. Pop. 12,000.

Ten'nessee, one of the United States, bounded N. by Kentucky and Virginia; W. by Arkansas and Missouri; S. by Mississippi, Alabama, and Georgia; and E. by North Carolina. It is distinguished for its fertility and picturesque scenery. Area, 45,600 square miles. Pop. 1,542,359. **Nash'ville**, on the Cumberland River, is the state-capital. Pop. 43,350.

Ten'nessee, a river of the United States, formed by the union of the Holston and the Clinch, near Knoxville; after a circuitous course it joins the Ohio, 50 miles above the confluence of that river with the Mississippi.

Tep'ic, a town of Mexico, on the summit of a mountain 25 miles E. of San Blas. Pop. 24,788.

Tex'as, formerly a province of Mexico, and an independent state from 1836 to 1845, when it was annexed to the United States, and admitted into the Union. It is bounded W. by New Mexico and the Rio Grande del Norte; N. by Indian Territory, and S. by Gulf of Mexico. Area, 237,504 square miles. Pop. 1,591,749. **Aus'tin**, on the Rio Colorado, is the state-capital. Pop. 10,960.

Tezcu'co, a city of Mexico, on a plain E. of the lake of the same name. Pop. 15,626.

Three Riv'ers, a city of Quebec, Canada, situated at the confluence of the St Maurice and the St Lawrence. Pop. 8670.

Tier'ra del Fue'go, a large island, or, more properly, a group of islands, separated from the southern extremity of South America by the Strait of Magellan, and is divided between Chili and the Argentine Republic. It consists almost wholly of rocks and mountains, many of whose summits are covered with perpetual snow.

Titica'ca, the sacred lake of the Peruvians, is situated partly in Bolivia, and partly in Peru, at an elevation of 12,493 feet above the Pacific. It is enclosed by the Andes. It is 120 miles in length, and receives the waters of numerous streams; but its only outlet is the Desaguadero, by which it communicates with Lake Uros.

Tlascal'a, a town of Mexico, capital of the department of the same name, once a populous and important city. Pop. 9710.

Toba'go, a British West India Island, one of the Windward group, N.E. of Trinidad, 28 miles long and 7 miles broad. Area, 97 square miles. Pop. 18,938. **Scar'borough** is the capital. Pop. 1200.

To'lima, one of the states of Colombia, South America, on the E. slope of the Central Cordillera. Pop. 231,000. The chief town is **Purificacion.**

Tope'ka, the capital of Kansas, United States, on the S. bank of the Kansas River, and on the Union Pacific Railway. Pop. 15,451.

Toron'to, a city of Ontario, Canada, situated near the head of Lake Ontario, 184 miles above Kingston, with an excellent harbour. Pop. 86,415.—43, 39 N. 79, 36 W.

Torto'la, one of the Virgin Isles, West Indies, belonging to Great Britain; it is 12 miles long and 4 miles broad. Pop. 8600.

Trinidad', with the exception of Jamaica, the largest of the British West India Islands, being 50 miles long by 34 miles broad. It is separated from the continent of S. America by the Gulf of Paria, and is distinguished for its fertility, scenery, and magnificent forests. Area, 1754 square miles. Pop. 153,128. **Port of Spain**, on the W. coast, is the capital. Pop. 20,000.—10, 38 N. 61, 32 W.

Trinidad', a seaport of Cuba, on the S. coast of the island. Pop. 14,500.

Troy, a flourishing town of New York, United States, on the Hudson, 6 miles above Albany. Pop. 56,747.

Truxil'lo, a seaport of Peru, on the Pacific, founded by Pizarro, in 1535. Pop. 6000.—8, 6 S. 79, 4 W.—Also a town of Venezuela, in the district or section of the same name, state of Los Andes. Pop. 28,000.

Tucuman', a city of the Argentine Republic, capital of the province of the same name, situated on the Dulce. Pop. 16,000.

Ur'uguay, or **Ban'da Oriental.** *See* page 367.

U'tah, erected into a territory of the United States in 1850, is bounded on the N. by Idaho and Wyoming; on the W. by Nevada; on the S. by Arizona; and on the E. by Wyoming and Colorado. Area, 128,835 square miles. Pop 143,963. **Salt Lake City** is the capital. Pop. 20,768.

U'tica, a flourishing town of New York, United States, on the Mohawk, where the Erie Canal joins that river. Pop. 33,914.—43, 6 N. 75, 21 W.

Valdi'via, a city and seaport of Chili, capital of a province of the same name, with a capacious harbour. Pop. 2000.—39, 50 S. 73, 30 W.

Valen'cia, a city of Venezuela, state of Carabobo, near Lake Tacarigua. Pop. 61,700.—10, 8 N. 67, 55 W.

Valladolid', an inland town of Mexico, state of Yucatan, much resorted to by invalids because of its salubrious climate. Pop. 18,472.

Valparai'so (the vale of Paradise, so named from its delightful situation), the principal seaport of Chili, situated on a bay of the Pacific. It has a large foreign trade. It is connected by a railway with Santiago, the capital of Chili. Pop. 97,750.—33, 2 S. 71, 41 W.

Vancouv'er Island, an island off the W. coast of the Dominion of Canada, forming part of the province of British Columbia. It is 270 miles long and 75 miles broad, covered with immense woods. Estimated area, 16,000 square miles. Pop. 10,000. **Victoria** is the capital.

Venezue'la. *See* page 358.

Ve'ra Cruz, the principal seaport of Mexico, in the state of the same name. It is situated on the Gulf of Mexico. Pop. 16,848.

Ver'mont, one of the United States, bounded on the W. by New York; on the E. by New Hampshire; on the S. by Massachusetts; and on the N. by Canada. The centre is traversed by parallel ranges of the Green Mountains, which enclose many fertile valleys. Area, 10,212 square miles. Pop. 332,286. **Montpel'ier** is the state-capital. Pop. 1847.

Vicks'burg, a city and port of entry, Mississippi, United States, is situated on the Mississippi, 400 miles above New Orleans. Pop. 11,814.

Victo'ria, a city near the S.E. extremity of Vancouver Island, capital of the province of British Columbia. Pop. 5925.

Victo'ria, a seaport of Brazil, the capital of the province of Espirito Santo, on an island in the fine bay of that name. Pop. 6000.

Vil'la Vico'za, a town of Brazil, in the province of Ceara, surrounded by groves of cocoa-palms. Pop. 5000.

Virgin'ia, one of the United States, bounded N. by Maryland; E. by Maryland, the Bay of Chesapeake, and the Atlantic Ocean; S. by North Carolina and Tennessee; and W. by West Virginia and Kentucky. It presents a

great variety of surface, from the mountain ranges of the Alleghanies to sandy flats on the sea-coast. Useful minerals are found in abundance, and the soil, though various, is admirably adapted for agricultural purposes. The state is especially famous for tobacco. Area, 38,348 square miles. Pop. 1,512,565. **Richmond** is the capital.

Virginia City, the commercial capital of Nevada, United States, is situated on the E. slope of Mount Davidson, 15 miles N.N.E. of Carson City. Its silver mines are said to be the richest in the United States. Pop. 10,917.—Also the capital of Madison county, Montana territory, located in the midst of a rich mining district, at an altitude of 5713 feet above the level of the sea.

Virginia, West, one of the United States, formerly the western section of the State of Virginia, from which it separated in 1862, when the eastern part declared for secession from the central government. West Virginia was erected into a state and admitted into the Union in 1863. Area, 23,000 square miles. Pop. 618,457. **Wheeling** is the capital.

Virgin Isles, a numerous group in the West Indies, to the E. of Port Rico. *Santa Cruz, St Thomas*, and *St John* belong to Denmark; *Tortola, Virgin Gorda, Anegada*, etc., belong to Britain, and are attached to the colony of Leeward Islands, their pop. being 5287.

Wa'bash, a river of the United States, which rises on the W. border of Ohio, separates Indiana from Illinois, and joins the Ohio 100 miles above its junction with the Mississippi.

Wash'ington, the capital of the United States. Pop. 147,293. *See* REMARKS, page 351.—Also a territory of the United States, bounded N. by British America; E. by Idaho; S. by Oregon; and W. by the Pacific. Area, 176,141 square miles. Pop. 75,116. **Olym'pia** is the capital of the territory. Pop. 1232.

Wel'land Canal, in Ontario, Dominion of Canada, connects Lake Erie and Ontario.

Wheel'ing, the capital of West Virginia, United States, on the Ohio. Pop. 30,737.

Wil'mington, the chief town of Delaware, United States. Pop. 42,478.

Win'nipeg, a large lake of Manitoba, Dominion of Canada, N.W. of Lake Superior. Length 240 miles; breadth 55 miles.

Win'nipeg, the capital of Manitoba, Dominion of Canada. Pop. estimated at 12,000.

Wiscon'sin, one of the United States, bounded N. by Lake Superior and Michigan; E. by Lake Michigan; S. by Illinois; and W. by Minnesota and Iowa. The soil is fertile and abounds in valuable minerals. Area, 53,924 square miles. Pop. 1,315,497. **Mad'ison** is the state-capital. Pop. 10,324.

Worcester, *woos'ter*, a city of Massachusetts, United States, 38 miles S.W of Boston. Pop. 58,291.

Wyo'ming, a territory of the United States, bounded N. by Montana; E. by Dakota and Nebraska; S. by Colorado and Utah; and W. by Idaho. Pop. 20,789. **Cheyenne** is the capital. Pop. 3456.

Xalapa, or **Jalapa** (Hala'pa), a city of Mexico, 50 miles W.N.W. of Vera Cruz. Pop. 14,217.

Xaray'es, a lake of Brazil, formed by the waters of the Paraguay which, in the rainy season, spread over a vast extent of ground.

Yarmouth, *yar'muth*, a seaport of Nova Scotia, on the W. coast. Pop. 6280.

York Fort, the most important station or factory of the Hudson Bay Company, on the W. shore of Hudson Bay, district of Kewatin.

Yu'catan, a peninsular state of Mexico, projecting 360 miles from the continent between the Gulf of Mexico and the Caribbean Sea, and separated from the island of Cuba by a channel 120 miles broad. Area, 29,560 square miles. Pop. 285,386.

Zacate'cas, a city of Mexico, capital of the department of Zacatecas, in the neighbourhood of rich silver-mines. Pop. 30,113.

Zanes'ville, a manufacturing town of Ohio, United States. Pop. 18,113.

OCEANIA

Is a collective term for all the islands of the Pacific Ocean not belonging to any state in Asia or America. It is subdivided here into three groups, viz. :—

MALAYSIA, or the islands lying between Asia and Australia.

AUSTRALASIA, consisting of the great islands, Australia, Tasmania, and New Zealand.

POLYNESIA, the remaining islands scattered over the Pacific, a world of islets.

I. MALAYSIA.

The islands embraced under this head form an archipelago, variously called Malay, Eastern, East Indian, and Asiatic. The political relations, and the relative importance of these islands, or of the groups they form, may be roughly represented thus :—

		Sq. Miles.	Population.
Philippine and Sulu Islands......	Spanish......	115,000.......	6,500,000
Sunda and Molucca Islands......	Dutch.........	655,000.....	28,500,000
Papua, or New Guinea...........	Native.........	300,000.........	500,000

The total area of Malaysia is over 1,000,000 square miles, and the total population about 35,000,000.

REMARKS.

The islands of Malaysia lie between 11° S. lat. and 21° N. lat., and between 95° and 151° E. long. The name is due to the prevalence of the Malay race in the population ; but this prevalence diminishes eastward of the important line named after the British naturalist, A. R. Wallace, who first pointed it out. Wallace's line follows the deep channel which runs between Bali and Lombok, two of the Lesser Sundas, and between Borneo and Celebes, two of the Greater Sundas, and thence north-eastward. On both sides of this line the seas are comparatively shallow ; yet the *fauna* and *flora* of the islands towards Asia are Asiatic, while the *fauna* and *flora* of the islands towards Australia are Australian in character. The marsupial animals of Australia, for example, are not found on the Asiatic side of Wallace's line. East of Wallace's line, the diminutive and demonstrative blacks of Australian type, commonly called Papuans, outnumber the Malays, a brown race of Asiatic origin, lazy and taciturn. For the most part, the Malays are Mohammedan, the Papuans heathen.

Remarkable also is the volcanic line in Malaysia. Traversing the Philippine Islands in their length, it is continued among the Moluccas and Lesser Sundas, and along the whole length of Java

and Sumatra, leaving Borneo out altogether, and touching only the north-eastern corner of Celebes. In no part of the world are subterranean fires more active. The latest great outburst was that of Krakatau Island, situated in the fair-way of Sunda Straits, and measuring 5 miles by 3 miles, with a peak 2750 feet high. Suddenly in August 1883, but unseen because of the impenetrable volcanic cloud, Krakatau Island was reduced to one-third of its size as given above, while the sea swept the adjacent shores with destruction to life as well as property. The site of Krakatau volcano is now a depth of water fathomless with a line of 1000 feet; and two new islands are believed to be portions of Krakatau Island hurled through the air to a distance respectively of 7 and 8 miles. The climate is more uniform in Malaysia than anywhere else within the tropics, one consequence of which is that the mountains which overspread all the islands, and in Borneo and Papua, the largest two, approximate to the Swiss Alps in height, are wooded to the top.

Spanish.—Philippine and Sulu Islands; capital **Manilla,** in Luzon, the most northerly, and the largest of the Philippines. With its 160,000 inhabitants Manilla is a match for the larger cities of the mother-country; it has a first-rate harbour, and gives name to excellent hemp and cheroots.

Dutch.—Sunda and Molucca Islands. The Greater Sundas are—Borneo, Sumatra, Java, and Celebes. Borneo is the largest island on the globe after Australia, Greenland, and New Guinea: principal towns, Pontianak on the west coast, Bandjermasin on the south coast. Sumatra is about the size of Great Britain; principal towns, Padang on the west coast, Bencoolen on the east coast, and Palembang, 50 miles up a river. Java is about the size of Ireland: principal towns, **Batavia,** capital of the Dutch East Indies; and Sourabaya, opposite Madura Island, which is under the same culture system as Java itself, the industry of the natives in both being directed by government officials. Celebes, about the same size as Java, is very fertile in both rice and sago, which are the staples of food throughout Malaysia; chief town, Macassar.

Of the Lesser Sundas, Banca is particularly rich in tin.

The Moluccas are also called Spice Islands, because of the cloves and nutmegs they yield: Amboyna, on an island of the same name, is the Dutch capital.

Portuguese.—North-eastern corner of Timor, which is the most easterly and the largest of the Lesser Sundas.

British.—Labuan, an island off Borneo, with a good harbour, which serves as a coal-depôt.

Native.—Mindanao, the second largest of the Philippines, is only nominally Spanish. Dutch rule is maintained largely by means of native princes; and in the north of Sumatra, the state of Acheen still defies the Dutch arms. The northern third of Borneo

is independent; part of it being governed by native sultans, the Sarawak district by the representatives of the late Sir James Brooke, and the extreme north by a company of British merchants. New Guinea, the largest island on the globe, after Australia and Greenland, is practically independent, though the Dutch claim the western half. In the interest of the Australian colonies, particularly of Queensland, a British Commissioner was stationed on the south coast in 1884. Mangrove swamps abound on the shores towards Australia.

EXERCISES.

What islands are included under Oceania? Define the three subdivisions of Oceania. How is Malaysia variously named an archipelago? What is the area, and what the population of Malaysia? What European power is paramount in it? What groups belong to Spain?

Between what degrees of latitude and longitude does Malaysia extend? Account for the name. Trace Wallace's line. Explain its importance. What races of men prevail on either side of it? What is the religion of these races respectively? Trace the volcanic line. What large island is wholly out of it? Describe the volcanic outburst of 1883 in the Straits of Sunda. What of the climate of Malaysia? What of the mountains? What of the natural resources?

Where is Manilla? For what is it famed? Name the four Greater Sundas. Which is the largest of them? Name the two chief towns in it. Give some notion of the size of Sumatra, Java, and Celebes respectively. In which of them is the capital of the Dutch East Indies? Which of them is fertile in both the Malaysian staples of food? Where are Bencoolen, Palembang, and Macassar? What is meant by the "culture system?" In what islands is it carried out? Which one of the Lesser Sundas is rich in tin? Why are the Moluccas called Spice Islands? Name their capital.

In what island of what group is the Portuguese territory? Of what use is the British island Labuan? Which large Philippine island is only nominally Spanish? What native state in Sumatra is still independent? How is the north of Borneo variously governed? Give some notion of the size of New Guinea. What of its political relations and prospects?

II. AUSTRALASIA,

LITERALLY meaning Southern Asia, is here used as a collective term for the British colonies in Australia, Tasmania, and New Zealand, viz.:—

Colonies.	Sq. miles.	Population.	Capitals.
Queensland	668,000	227,000	Brisbane.
New South Wales	309,000	752,000	Sydney.
Victoria	88,000	862,000	Melbourne.
South Australia	903,000	280,000	Adelaide.
West Australia	976,000	29,000	Perth.
Tasmania	26,000	116,000	Hobart.
New Zealand	104,000	534,000	Wellington.

Islands.—In Australia, Great Sandy, Melville and Bathurst, Kangaroo: in Tasmania, King and Flinders, Bruny: in New Zealand, Great Barrier, Stewart, Warakauri or Chatham group.

Straits.—Torres, Bass, Banks, Cook, Foveaux.

Gulfs.—In Australia, Carpentaria, Van Diemen, Great Australian Bight, Spencer, St Vincent, Port Phillip: in New Zealand, Hauraki, Bay of Plenty, Hawke' Bay, Tasman or Blind Bay, Pegasus Bay, Canterbury Bight.

Capes.—In Australia, York, Catastrophe and Spencer, Otway, Wilson Promontory: in Tasmania, Grim, Portland, South: in New Zealand, Maria, Van Diemen, Egmont, Palliser, East, Farewell, Pompey's Pillar, South.

Mountains.—Australian and New Zealand Alps.

Lakes.—In Australia, Torrens, Eyre, Gairdner, Amadeus, Austin: in New Zealand, Taupo, Wanaka, Wakatipu.

River.—In Australia, Murray.

REMARKS.

The total area of Australasia is not far below that of all Europe. Tasmania, the smallest colony, is nearly as large as Scotland, and West Australia, the largest one, is eight times the size of the British Isles.

Australia is merely a geographical term, the colonies among which it is divided being politically independent of each other. Measuring 2500 miles from W. to E. and 2000 miles from N. to S., it is the largest island on the globe; not but that the so-called continents are also islands. Its area is nearly four-fifths that of Europe. The interior is a great sandstone saucer, the drainage of which collects mostly in shallow lakes, which, being without outlet, are salt. So extensive is the central waste that about one-fifth of the whole area of Australia is believed to be unfit for occupation by civilized man. For 1200 miles along the Great Australian Bight, there is not a single river-mouth, because there the margin of the saucer runs close to the shore. Elsewhere, this margin runs 50-200 miles inland; and rivers reaching the sea are formed accordingly. The eastern margin contains the highest mountains. Beginning in Victoria with the Grampians, mountain ranges pass into New South Wales under the name of Alps, and run on to the north of Queensland. Several of the Alpine peaks rise above the limit of perpetual snow, with glaciers attached. The highest of all is Mount Hotham, 7500 feet, in Victoria; and the next highest, Mount Kosciusko, 7308 feet, in New South Wales. The rivers on the east coast are liable to destructive floods: those which descend from the landward side of the mountains, and which are neither

lost in the arid interior, nor received into lakes without outlet, unite to form Murray River. This largest of Australian rivers offers, with its tributaries, Murrumbidgee, Lachlan, and Darling, thousands of miles of inland navigation ; but it is not accessible to ocean craft, owing to the shallowness of Lake Alexandrina, through which it reaches the sea. During long droughts, which are the curse of Australia, the limits of inland navigation are greatly abridged. The region of most abundant rainfall is that of the monsoons in the north-east, which comes down as far as Brisbane on the east coast, but on the west coast only to 17° S. lat. The consequence is that one hundred miles on the Gulf of Carpentaria contains more and larger rivers than the whole east coast of Australia ; not but that some of the east coast rivers are navigable. Both the *fauna* and the *flora* native to Australia are poor. Along with Tasmania and New Guinea, Australia is the home of pouched animals, as the kangaroo : exempt from wild beasts, it abounds with stinging abominations ; and berries are its one vegetable product fit for food. Its characteristic trees are species of *eucalyptus*, with leathery leaves, which present generally not the surface, but an edge, to the sky. But the *fauna* and *flora* of Europe flourish there ; and Australia is now a land of horses, cattle, sheep, corn, and wine. Maize is the prevalent grain on the borders of Queensland and New South Wales ; wheat prevails farther south. Gold is of industrial importance in all the colonies of Australia, except West Australia ; silver and copper are mined in South Australia ; tin on the borders of Queensland and New South Wales ; coal in both these colonies, and iron also in the latter. The native Australian is a Papuan black, so little capable of civilisation that he is likely to die out in Australia, as he has already died out in Tasmania.

About 1000 miles east of Australia lies Norfolk Island, a former penal settlement, to which, in 1856, were brought from Pitcairn's Island a party of the descendants of the mutineers of the "Bounty." Though under the supreme command of the Governor of New South Wales, Norfolk Island is a separate British possession.

Queensland.—To this colony belong the islands in Torres Strait, some of which are nearer to New Guinea than to Australia. At a distance of 10–50 miles from the eastern shore, there runs for 1200 miles a coral reef, forming a natural breakwater, within which the depth is 10–60 fathoms, while outside it reaches 300 fathoms ; but this breakwater is also a bar to direct navigation coastwards. Queensland territory, being all either within or near the tropic of Capricorn, counts among its produce arrow-root and sugar. The capital, **Brisbane,** is at the head of ocean navigation on Brisbane River, 25 miles from its mouth ; but the river is navigated by steamers to Ipswich, 25 miles still higher up. Rockhampton is a busy shipping port farther north, situated on Fitzroy River, 45 miles from its mouth.

New South Wales.—This is the most highly favoured colony in respect of inland river-navigation, restricted though that be to about eight months in the year. Albury is the head of navigation on Murray River. The capital, **Sydney,** is the oldest town in Australia; and what with the land-locked sea-scapes of Port Jackson, on which it stands, the wild scenery of the Blue Mountains behind it, and its Italian climate, it claims a foremost place among the cities of the world for amenity. North of it, at the mouth of Hunter River, is Newcastle, so named because of the surrounding coalfield. Immediately south of Port Jackson is Botany Bay, once a familiar name in connexion with the transportation of convicts.

Victoria is at once the smallest and the most populous colony on the Australian mainland. This paradox is explained by the superior richness of the gold-mines in Victoria, the greater suitableness of its comparatively cool climate to the British race, and the fact that more rain falls in the corner where it lies than elsewhere in extratropical Australia, because of the mass and height of the mountains there. Among the Victorian mountains grow forests of the eucalyptus, some of which, rising straight as an arrow to a height of 500 feet, are the tallest trees in the world. The capital, **Melbourne,** a little way up the Yarra-Yarra, is the largest city in Australia. Ballarat and Sandhurst are gold-mining centres. Geelong, on a western bend of Port Phillip, is the centre of a rich agricultural district.

South Australia.—This colony might be called North and South Australia, for its territory extends across the whole breadth of the island. The capital, **Adelaide,** on the eastern shore of the Gulf of St Vincent, is the centre of the only well-settled district, a notable wheat-land. On the opposite side of the same gulf, York peninsula, barren on the surface, is rich in copper, and supports a large mining population. This colony may be said to have taken possession of its whole territory by establishing a telegraph from Adelaide to Port Darwin on the northern shore.

West Australia, never having offered the attraction of goldfields, is the most backward colony in Australia. The settled districts are in the south-west corner, where also is the capital, **Perth.** In the north, towards the region of the monsoons, was discovered, in 1879, an agricultural and pastoral region of great promise, as large as Scotland; much of it lies on Fitzroy River, the largest in West Australia, and navigable by small steamers for at least 100 miles from its mouth.

Tasmania, about the size of Ireland. With *fauna* and *flora* similar to those of the Australian mainland, this island has bolder shores, a more mountainous interior, denser forests, a greater rainfall, more constant rivers, and a climate better adapted to the processes of British husbandry. Its surface is divided into two by

a depression which runs north and south, containing the two principal rivers, the Tamar and Derwent. The eastern and smaller division culminates in Ben Lomond, 5010 feet; the western and larger one in Cradle Mountain, 5069 feet. The capital, **Hobart,** on the Derwent, is connected by railway with the next town in importance, Launceston, on the Tamar. Fruits, both fresh and preserved, form an important article of export.

New Zealand is the physical counterpart of the British Isles at the antipodes, being nearly of the same size and enjoying a similar climate. The mountains are both loftier and more widely distributed, however, so that most of the rivers are torrents, bringing down immense quantities of rock-rubbish; and the scenery is on a scale intermediate between the Scottish and the Swiss. Of the two principal islands, distinguished as North and South, the latter is the more compact and the larger: it contains also the highest mountain, but not the longest river. So deeply indented is the outline of North Island that the isthmus, on which the town of Auckland stands, measures only about a mile across at the narrowest part. The highest mountain of all is Mount Cook, 12,349 feet, a snow-clad peak of the Southern Alps, which run along the western side of South Island. The highest mountain in North Island is Ruapehu, 9195 feet. From Ruapehu descends the largest river, the Waikato, which traverses Taupo, the largest lake, and is navigable for 100 miles up by vessels of 30 tons. North of Ruapehu rises Tongariro, an active volcano; and between Lake Taupo and the Bay of Plenty lies the hot-lake district of Rotorua, exhibiting the same volcanic phenomena, though on a smaller scale, as have made famous the Yellowstone National Park (page 349). The *fauna* and *flora* of New Zealand differ characteristically from those of Australia. A small rat was the only indigenous mammal. The *flora* included, besides magnificent timber trees, the sweet potato, many species of ferns, one of them with an edible root, and a coarse flax, which is still exported for the manufacture of ropes. The animals and plants of Europe flourish in New Zealand: the grasses, the house-fly, and the rat of Europe are even supplanting the native varieties; and rabbits have become a pest. The olive-complexioned native race, called Maories, differ little from Europeans in size and features, and are a match for them in courage. Most of them have accepted civilisation and Christianity. They number about 40,000, and are located chiefly in North Island. The mineral wealth of New Zealand is pointed out in the following notice of the provinces, which, though no longer administrative divisions, are still popularly recognised:—

North Island.—Auckland, home of the *Kauri* pine, valuable for both timber and gum. Auckland town is the largest in North Island, and the third largest in the colony.—Taranaki, densely wooded, has rich ironsand along the shore.—Hawke Bay, a district of alluvial plains ascending to the Ruahine Mountains.

—Wellington contains the capital of New Zealand, also called **Wellington**, situated on Port Nicholson.

South Island.—Every province except Canterbury yields gold. —Marlborough, chiefly pastoral. —Nelson has gold, lead, and copper, vast beds of the finest ironstone, and good coal.—Westland, specially rich in gold.—Canterbury, a land of terraces, supposed to be old terminal moraines, of which thirty have been counted rising successively from the sea to the Alps. Its chief town, Christchurch, is the second largest in the colony.—Otago, especially rich in gold, yields also a fine building stone similar to Bath stone. Its chief town, Dunedin, is the largest in the colony.

Stewart Island has ironsand, like that of Taranaki shore.

EXERCISES.

What does Australasia literally mean? Name its three geographical divisions. Name the seven colonies which make it up, and the capital of each. Which is the largest of these colonies, and which the smallest? Which one is the most populous, and which the least so? Name four islands adjacent to the Australian mainland. Name two islands adjacent to the Tasmanian mainland. What islands are separated by the Torres, Bass, Banks, Cook, and Foveaux Straits respectively? Name four gulfs on the coast of Australia. Find out the great Australian Bight. Name four bays in New Zealand. What gulf is entered between capes Catastrophe and Spencer? Find out South Cape in Tasmania, and South Cape in New Zealand. Name the four largest lakes in South Australia.

Illustrate by comparison the enormous area of Australasia in general, and of Australia in particular. What about the size of individual colonies? Of the terms Australia, Tasmania, and New Zealand, which two are both geographical and political? Give the length and breadth of Australia. Describe the interior. What becomes of its drainage? Why does no river reach the sea on the great Australian Bight? Of what nature are the rivers on the east coast? Give an account of the mountain-ranges from which they descend. Name the highest two summits. Give an account of Murray River. Name its three principal tributaries. How far is it navigable? Where is the region of most abundant rainfall? Give some account of the *fauna* and *flora* of Australia. Which of the colonies on the east coast is divided between maize-lands and wheat-lands? What other islands possess the *fauna* and *flora* of Australia? Which of the Australian colonies is especially rich in gold? Which one in silver and copper? Where is tin found? Which two colonies have coal? Which one of the two has ironstone besides? What of the Australian natives? Give some account of Norfolk Island.

Give an account of the great Barrier Reef. Mention two articles of tropical produce which Queensland yields. Name its capital, and another town higher up the same river. Where is Rockhampton? Name the capital of New South Wales, and describe its site. How are Newcastle and Botany Bay situated in respect to it? What is the distinction of Albury town? Account for Victoria being at once the smallest and the most populous of the Australian colonies. Name its capital. What has attracted population to Ballarat, Sandhurst, and Geelong respectively? Why might South Australia be called North and South Australia? Name its capital.

Name the termini of the Trans-Australian telegraph. Where are the richest copper-mines? How may the backwardness of West Australia be in part accounted for? Give some account of its largest river. Name its capital.

Compare Tasmania with Ireland in size. Compare it with Australia in respect of surface, climate, *fauna* and *flora*. Give an account of the depression which divides it into two. Name the highest mountain in each moiety. Name the town on each of the two rivers in the depression. Which one is the capital? What article of export implies a genial climate?

How far does the New Zealand group resemble the British Isles? Compare the North and South islands in respect of outline and size, of mountains and rivers. Name and describe the highest mountain of all. On which side of North Island does the longest river reach the sea? Which is the largest lake of all? Where is the hot-lake district? Compare its wonders with those of the Yellowstone National Park. Give some account of the *fauna* and *flora* of New Zealand. How are they faring in presence of European plants and animals? Give some account of the natives. Name the four provinces of North Island. Which of them is the home of the *Kauri* pine? Which of them has deposits of ironsand? Which of them contains the capital of New Zealand? What rank, in point of size, does the town of Auckland hold in New Zealand and in North Island respectively? Of the provinces in South Island, which one has no gold-mines? Which one has the greatest variety of mineral wealth? Which two are specially rich in gold? How are the terraces of Canterbury province accounted for? Name the largest two towns in New Zealand, and the provinces to which they respectively belong. Which town is the largest of all? In what respect is Stewart Island like Taranaki province?

III. POLYNESIA

LIES within 30° N. and 30° S. of the equator. Its population is estimated at about 1,500,000. The principal groups are:—

British—Fiji and its dependency Rotumah.

French—New Caledonia and its dependency Loyalty Islands; Society; Marquesas. Tubuahi, Tuamotu, and Gambier are only Protectorates.

Spanish—Marianne or Ladrones, attached to the Philippine Islands.

Independent—Sandwich, Samoa or Navigator, Tonga or Friendly, New Hebrides, Solomon, New Britannia, Pelew, Caroline.

REMARKS.

Looked at on the map, the islands of Polynesia divide themselves into large and small; the comparatively large ones being those of the

Sandwich and Fiji groups, and those which, along with New Guinea and Australia, almost enclose the Coral Sea. These larger islands are of volcanic origin and mountainous, highly so for their limited area; the mountains of Fiji attaining 6000 feet, those of New Caledonia 8000 feet, and those of Hawaii, the largest member of the Sandwich group, 13,950 feet, in Mauna Loa, an active volcano. Of the smaller islands, some are also volcanic and mountainous, as the Tonga and Samoa groups east of Fiji; others are coralline, rising only a few feet above high-water mark. When the coral reef is circular, enclosing sea-water of considerable depth, the island is called an *atoll;* such are the Caroline Islands. Coral islets, crowned with cocoa-nut trees, are frequent even amid groups of volcanic origin; and coral reefs are in all the groups a danger to navigation.

The name Melanesia is sometimes given to the larger islands which shut off the Coral Sea from the Pacific main, because the natives are akin to the blacks of New Guinea and Australia. Elsewhere, the Malay element prevails. The great majority of the natives profess Protestant Christianity, and are conforming to European dress and manners: tattooing, for instance, is little practised by the rising generation. The climate throughout is cool for the tropics, and the fertility of the soil induces planters to settle for the cultivation of cotton, rice, sugar, and tropical fruits; but the natives, content with necessaries, and getting them with little effort from a bounteous nature, cannot be depended on for labour.

By far the most important groups are the Sandwich and Fiji Islands, because in them are the places of call for trans-Pacific steamers. The Sandwich Islands form an independent constitutional monarchy, but the influence of the United States of North America is paramount: capital **Honolulu**, on Oahu Island, with a land-locked harbour always accessible to the largest steamers. The largest islands in the British Crown colony of **Fiji** are Viti Levu and Vanua Levu, on the former of which is **Suva**, the seat of government. Levuka, on the small island of Ovalau, east of Viti Levu, was formerly the capital. Next in importance comes the French island of New Caledonia, capital **Noumea**, a penal settlement, and on that account odious to the colonists of Australasia. The countless smaller islands unnamed here are small only by comparison. Tahiti, for instance, the principal island in the Society group, is larger than Anglesey; and Savaii, the principal island in the Samoan group, is more than twice as large as Anglesey.

EXERCISES.

Between what limits of latitude does Polynesia lie? What may be the total population? Which of the islands are British? Name those which are French colonies. What of the Ladrones? Name the principal independent groups.

How may the larger islands be put into three groups? Illustrate the mountainous character of the larger islands. What and where is Mauna Loa? Mention two groups of smaller islands which are mountainous. What is an *atoll?* Which group is wholly composed of *atolls?* Which islands are grouped under the name Melanesia, and why? What change has come over the religion and manners of the natives? What of the climate and produce throughout Polynesia?

What gives special importance to the Sandwich and Fiji groups? What makes the French colony of New Caledonia odious to the colonists of Australasia? What are Honolulu and Noumea? Name the largest two of the Fiji Islands, and the present seat of Fiji government. Illustrate, by comparison, the size of some of the smaller islands.

POLAR REGIONS.

The cold is so much greater towards the S. pole than towards the N. pole, that the average ice-limit comes about 10° farther down from the former than from the latter. Sir James Ross, who, sailing from England in 1839, penetrated farthest in the direction of the S. pole, found a continuous coast-land, with lofty mountains, two of which he named after his ships Erebus and Terror. Mount Erebus is an active volcano, 12,400 feet high. The N. polar lands strictly so-called are low, though several mountainous districts lie within the Arctic Circle, viz., the north of Scandinavia, the north-east of Asia, and the north-west of America. The polar islands off the coast of America are crowded together, whereas those which lie off the coast of Europe and Asia form isolated groups. The north-east passage, and the north-west passage through the N. polar sea, have both been made in the interests of commerce, with the result of finding both of them useless, owing to the short time they are open, and the great risk of ships being frozen in. In 1876, Captain Nares returned to England after having penetrated up Baffin Bay and Smith Sound to within 400 miles of the north pole, 30 miles farther than had ever been reached before. He was stopped by ancient ice 80–120 feet thick, with a surface so broken and blocked as to be impracticable for sledges. Lieutenant Greely of the U.S. navy, who commanded a later expedition, reports that, on 13th May 1883, two of his officers reached a point still farther north, situated in 83° 24′ N. lat., and 44° 5′ W. long. From an elevation of 2000 feet they saw no land to the north; but they turned back from open water on the North Greenland shore, because they feared drifting into the Polar Ocean. The S. polar regions are without inhabitant: the N. polar regions are inhabited towards the Arctic Circle, on the continental coast-lands and on the immediately adjacent islands, by Samoyedes in the Old World, by Esquimo in the New.

EXERCISES.

What about the ice-limit in the direction of either pole? Name the explorers who have penetrated farthest in the direction of either pole. What and where are Erebus and Terror? Where are there mountains within the Arctic Circle? In what part of the Arctic Ocean are the islands thickly crowded together? Why are the north-east and north-west passages of no use to commerce? Give an account of Captain Nares' voyage. What part of the Arctic regions is inhabited? Name the two races. Where are they respectively found?

DESCRIPTIVE TABLE.

Acheen, or Achin, *at-cheen′*, a town of Sumatra, on the N.W. coast, the capital of a state of the same name. Pop. 36,000.

Ad′elaide (named in honour of the Queen of William IV.), the capital and seat of government of South Australia, on the Torrens River. Its port, of the same name, is situated 8 miles distant, on an inlet of St Vincent Gulf. Pop. 38,479.

Ade′lia Land, or Adelie′, a tract of barren land in the Antarctic Ocean, to the S. of Australia.

Ad′miralty Islands, a cluster of one large and several small islands in the South Pacific Ocean, N.E. of New Guinea.

Amboy′na (surrounded by water), one of the Molucca or Spice Islands, in the Indian Archipelago, to the S.W. of Ceram; it belongs to the Dutch, and is famous for cloves. Pop., with Banda, 233,608.—The chief town is of the same name. Pop. 13,000.

Arroo′, or Aru′, a group of islands in the Indian Archipelago, 80 miles S.W of Papua or New Guinea; the largest is 70 miles long and 20 miles broad. They produce pearls, mother of pearl, tortoise-shell, etc., and birds of paradise are very numerous.

Auck′land, a provincial district of North Island, New Zealand. It comprises the northern half of the island, and has a coast line of nearly 1200 miles. It is rich in minerals, and is remarkable for its hot springs and streams, warm lakes, geysers, and mud volcanoes. Pop. 99,451.—The chief city, also called **Auckland,** is located in the county of Eden, on the southern shore of Waitemata Harbour, an inlet of Thames Gulf. Pop., including suburbs, 37,777.

Auckland Islands, a group in the Pacific, to the S. of New Zealand. The largest is 30 miles long and 15 miles broad.—50° 48′ S. lat., 166° 42′ E. long. They are claimed by Great Britain.

Aus′tral Isles, a fertile group in the South Pacific, to the E. of Cook Islands. The principal islands are, *Oheteroa*, *Toobouai*, and *Rimatara*.

Australia. *See* REMARKS, page 398.

Austra′lian Alps, a mountain range in the S.E. of Australia, partly in Victoria and partly in New South Wales. *See* REMARKS, page 398.

Australian Bight, The Great, an extensive indentation on the S. coast of Australia, between Cape Arid and Cape Catastrophe. *Bight* signifies a bend of the shore, and is synonymous with *bay*.

Bali, *bâ′le*, or **Little Java,** an island of the Indian Archipelago, to the E. of Java, its length, from E to W., is 70 miles, its breadth 35 miles. It has a considerable export trade Pop. 864,000.

Ballarat′, or Ballaarat′, one of the oldest of the Australian gold-field towns, about 100 miles N.W. of Melbourne, Victoria. Pop., including Ballarat East, 38,469.

Ban′ca, an island off the N.E. coast of Sumatra, from which it is separated by the Strait of Banca. It is celebrated for its tin-mines. Pop. 62,216. —2, 20 S. 106, 0 E.

Banks Islands, a group in the S. Pacific Ocean, named in honour of Sir Joseph Banks.—14 S. 168, 30 E.

Banks Peninsula, a mountainous and woody territory, forming the county of Akoroa, on the E. coast of South Island, New Zealand.

Bass Strait (named from Bass, a navigator, who ascertained its existence as a *strait*), separates Australia from Tasmania. Where narrowest, it is about 105 miles across.

Bata′via (the good land) capital

of the island of Java and of the Dutch possessions in the East. It is situated on the N.W. coast, and carries on an extensive commerce. Pop. 135,000.

Bath'urst, a town of New South Wales, Australia, on the W. bank of the Macquarie, 97 miles from Sydney. Pop. 7221.

Bencoo'len, a seaport on the S.W. coast of Sumatra; it belongs to the Dutch, having been given to them by the British in 1824, in exchange for Malacca. Pop. 13,000.

Bil'liton, or **Blitong'**, an island of the Eastern Archipelago, between Sumatra and Borneo, rich in iron and timber. Pop. 26,160.

Blenheim, the capital of the provincial district of Marlborough, in the N.E. of South Island, New Zealand. Pop. 2107.

Bonin Islands, *bo-neen'*, three groups in the North Pacific, belonging to Japan.—Between 26, 30 and 27, 44 N. and 142 and 143 E.

Boo'ro, or **Bou'ro**, an island of the Eastern Archipelago, W. of the Moluccas. It is fertile and well watered, producing rice, sago, fruits, and dyewoods. Pop. 18,000.

Bor'neo, called by the natives **Pulo-Kalamantin**, a large island lying directly beneath the equator, to the E. of Sumatra and the Malay Peninsula, and to the N. of Java. It is more than three times the size of Great Britain, and has a population estimated at 2,000,000. Two ranges of mountains nearly parallel to each other, and rising to an elevation of upwards of 13,000 feet, extend from S.W. to N.E.; some of these are volcanic, and give rise to earthquakes. There are some large rivers navigable for a considerable distance. *See* REMARKS, page 396.

Braid'wood, a town of New South Wales, Australia, 180 miles S.W. of Sydney. Pop. of district, 6965.

Bris'bane, a city on a river of the same name, which flows into Moreton Bay, on the E. coast of Australia. It is the capital of the British colony of Queensland, and lies about 500 miles N. of Sydney. It was originally settled in 1825, having been made a penal station by Sir Thomas Brisbane (at that time Governor of Australia), from whom its name is taken. In 1842 it was opened to free settlers, and from that period the city has made steady and substantial progress. Pop. 31,109.

Canterbury, a provincial district of South Island, New Zealand. Pop. 112,182.

Car'oline Islands, a numerous coral group in the Pacific, E. of the Philippines and S. of the Ladrones. They are exposed to violent hurricanes; the natives are distinguished for their skill in navigation. Pop. 18,800.

Carpenta'ria, Gulf of, a large inlet on the N. coast of Australia. It was discovered by the Dutch in 1627.

Cel'ebes, a large island of the Indian Archipelago, E. of Borneo, from which it is separated by the Strait of Macassar. It is so indented by deep bays as to form four long peninsulas. Its length is about 500 miles; its average breadth 150 miles. The area is estimated at 66,750 square miles; pop. 4,000,000.

Ceram', or **Zeram'**, called by the natives **Sirang'**, one of the largest of the Moluccas or Spice Islands, in the Indian Ocean. It belongs to the Dutch. Pop. estimated at 28,000.—3, 0 S. 129, 0 E.

Chatham Islands, a small group to the E. of New Zealand. Pop. 196.

Christchurch, a town in the county of Selwyn, provincial district of Canterbury, on the E. coast of South Island, New Zealand. Pop. 15,213; with suburbs, 30,719.

Cook Islands, a group in the South Pacific, between the Society Islands and the Friendly Islands. Pop. estimated at 7746.

Cook, Mount, a peak of the Southern Alps, provincial district of Canterbury, New Zealand, 12,349 feet above the sea.

Cook Strait, between North and South Islands, New Zealand. It is 120 miles in length, and 30 miles in breadth at its narrowest part. It derives its name from the navigator by whom it was discovered in 1770.

Dune'din, the capital of the provincial district of Otago, on Otago harbour, on the E. coast of South Island, New Zealand. It was founded in 1848, and is the largest, best built, and most important commercial city in the colony. Pop. 24,372.

East'er Island, or **Tea'py Island**, an island of volcanic origin in the South Pacific; it is about 20 miles in circuit, and 1200 feet in elevation. Pop. about 1200.—27, 9 S. 109, 12 W.

Eastern or Indian Archipelago. *See* MALAYSIA, page 395.

Fiji Islands, *fee-jee'*, a group in the Pacific Ocean, between 15 and 22 S., and 175 E. and 177 W. They number about 250, and are remarkable for their beauty and fertility. The inhabitants were formerly savages, and even cannibals, but by the efforts of missionaries they have, with the exception of a few tribes, been converted to Christianity, and a great reform has happily taken place. The sovereignty of the islands was ceded to Queen Victoria in 1874, and shortly afterwards they were formed into a British colony. Total area, 8034 square miles; pop. 125,000, of which about 2500 are whites. The island of *Rotumah*, lying 300 miles to the N.N.W. of the Fiji group, was ceded to Great Britain and annexed to the colony of Fiji in 1880. Seat of government, **Suva,** on the island of Viti Levu.

Flo'res, an island of the Malay Archipelago, S. of Celebes. Length from W. to E. about 200 miles; average breadth 35 miles.

Fre'mantle, a seaport of Western Australia, at the mouth of the Swan River; it is the principal port of the colony. Pop. 3641.

Friendly or **Tonga Islands,** a numerous group in the Pacific Ocean, to the S.W. of the Society Islands. The principal are *Tongataboo* (the sacred isle), *Anamooka, Vavaoo, Eooa,* and *Tofoa.* They were called the *Friendly Islands* by Captain Cook, on account of the hospitality received from the natives, who afterwards were found to be a very treacherous race, but have now made some progress in civilisation.

Geelong', a town of Victoria, Australia, at the head of the W. arm of Port Phillip, 45 miles from Melbourne. Pop. 12,000; with *Geelong West*, 16,000.

Gilo'lo, the largest of the Moluccas or Spice Islands, in the Indian Archipelago; like Celebes, it is broken into four peninsulas, separated from each other by deep bays. Estimated area, 6500 square miles.—1 N., 128 E.

Goul'burn, a city of New South Wales, 128 miles S.W. of Sydney. Pop. 5880; of district, 14,000.

Hawaii, *hä-wi'ee*, or **Owhyhee,** the largest and most southerly of the Sandwich Islands. Pop. 17,000. *See* **Sandwich Islands.**

Hawaiian Islands. *See* **Sandwich Islands.**

Hawke Bay, a provincial district of New Zealand, in the S.E. of North Island. Pop. 17,367.

Hawkes'bury, a river of New South Wales, Australia; after a course of 330 miles, it enters the Pacific at Broken Bay, 25 miles N.N.E. of Sydney.

Hob'art (until 1881 known as Hobart Town), the capital of Tasmania, picturesquely situated at the foot of Mount Wellington (which towers 4166 feet above the N.W. end of the city), on the River Derwent, about 12 miles from its mouth. Pop. 21,118.

Hokiti'ka, a town in the county of Westland, on the W. coast of South Island, New Zealand, on the Hokitika River. There are extensive gold-mines in its neighbourhood. Pop. 2600.

Indian Archipelago. *See* MALAYSIA, page 395.

Ipswich, a town of Queensland, Australia, on the Brisbane River; in business importance it rivals Brisbane, the capital. Pop. 5699; with suburbs, 7048.

Ja'va, a large island of the Eastern Archipelago, lying between 5, 52 N. and 8, 50 S., and between 105, 15 and 114, 40 E. It extends from E. to W. about 600 miles, with an average breadth of 100 miles, and is traversed through nearly its whole length by a range of volcanic mountains. The Dutch possessions are chiefly on the N. coast, which has a great number of rivers and fine bays. Java surpasses all the other islands of the Archipelago in fertility and population; it is fruitful in rice, sugar, and coffee, and has extensive forests of teak. Area, including the contiguous island of *Madura*, 52,000 square miles. Pop. 18,334,691.

Kangaroo' Island, an island off the coast of South Australia, 85 miles in length, with a breadth of about 20 miles.

Krakatau. *See* REMARKS, p. 396.

Labuan' (an anchorage), an island of the Indian Archipelago, off the N.W. coast of Borneo. Length 10 miles, breadth 5 miles. It was taken possession of by the British in 1846, and forms a valuable naval station. It possesses extensive beds of excellent coal. Pop. 6000.—5, 22 N. 115, 10 E.

Ladrones' (the islands of the thieves), **Marianne** or **Mariana Islands,** a group belonging to Spain, in the N. Pacific Ocean, E. of the Philippines and N. of the Carolines, between 12 and 17 N. and 144 and 145 E.

They were called the *Mariana Islands* in honour of the queen of Philip IV. of Spain, and *Ladrones* because of the thievish propensities of the inhabitants when discovered by Magellan in 1521.

Laun'ceston, a town in the N. of Tasmania, on the Tamar, about 40 miles from its mouth. Pop. 17,000.

Liverpool, a town of New South Wales, Australia, 22 miles S. from Sydney. Pop. of district, 6520.

Lombok', an island of the Indian Archipelago, E. of Bali and W. of Sumbawa, between 8 and 9 S. and 116 and 117 E. Pop. 250,000.

Low Archipelago, or Paumota Islands, an extensive and intricate group of coral reefs and islands in the South Pacific, E. of the Society Islands, and S. of the Marquesas.—16, 0 S. 140, 0 W.

Luzon, *loo-thōn'*, the principal of the Philippine Islands. It is intersected by high mountains, having several active volcanoes. *See* **Philippine Islands.**

Lyt'telton, a town of New Zealand, on the E. coast of South Island, provincial district of Canterbury, county of Selwyn. Pop. 4127.

Macar'thur, a river of Victoria, Australia, flows from the Australian Alps into Lake King, an inlet of the Southern Ocean. — Also, a river of North Australia, flows into the Gulf of Carpentaria.—Also, a river of New South Wales, tributary to the Gloucester.

Macas'sar, or Mankas'ser, the chief town and settlement belonging to the Dutch in the Indian Archipelago; it is S.W. of the island of Celebes. A strong fort by which it is defended is named *Fort Rotterdam*. Pop. 20,000.

Macassar, Strait of, an arm of the Indian Ocean, separating the islands of Borneo and Celebes.

Madura, an island of the Indian Archipelago, off the N.E. coast of Java, from which it is separated by a narrow strait. Pop. 500,000.

Malaysia. *See* page 395.

Manilla. *See* REMARKS, page 396.

Marl'borough, a provincial district in the N.E. of South Island, New Zealand. Pop. 9300.

Marquesas, *mar-kā'sās*, a group of lofty islands belonging to France in the S. Pacific. Their general aspect is beautiful, their soil fertile, and the natives are strong, tall, and well formed. They are also called the **Mendaña Islands**, *men-dān'yā*, in honour of the navigator by whom they were discovered in 1595. Pop. 6000.—Between 8 and 11 S. and 140 W.

Ma'ryborough, a town of Victoria, Australia, county of Talbot, 104 miles N.W. of Melbourne, in the centre of gold-fields. Pop. 3305; of district, 6,686.

Maryborough, the chief town of March county, Queensland, Australia, on the Mary River. Pop. 10,500.

Mel'bourne, a seaport of Australia. Pop., including suburbs, 282,981. *See* REMARKS, page 400.

Mindana'o, the southernmost of the Philippine Islands, 300 miles in length, and having an estimated area of 36,000 square miles.

Moluc'ca Passage, that part of the Indian Ocean which separates the island of Celebes from the island of Gilolo.—2, 0 N. 127, 0 E.

Moluc'cas, or Spice Islands, a group in the Indian Archipelago, between Celebes and New Guinea, famous for the production of cloves, nutmegs, and other spices. The chief islands are *Gilolo*, *Amboyna*, *Ceram*, *Ternate*, and *Tidore*.—3 N. 127, 30 E. Pop. 332,000.

Mur'ray, the principal river of Australia. It rises in the Australian Alps, and, after a course of 1120 miles, reaches Encounter Bay by Lake Alexandrina.

Naviga'tors', or Samo'an Islands, a group in the South Pacific, N.E. of the Friendly Islands. They are mountainous, with rich and well-wooded valleys between. The natives are tall and finely formed, and are Christians. They are under the protection of the United States of North America. The chief ports are *Apia*, the capital, and *Pango-Pango*.—12, 0 S. 170, 0 W. Pop. 37,000.

Nel'son, *nel'sun*, the capital of the provincial district of the same name, in the N. of South Island, New Zealand. Pop., inclusive of suburbs, 9323.

New Britain, an island in the South Pacific, between 5 and 7 S. and 148 and 153 E. The N. parts are rocky and mountainous. In the S.E. corner is a peninsula containing three mountains called Mother and Daughters. The North Daughter is a volcano 1700 feet high; and situated between the Mother and South Daughter is another volcano, during a violent eruption of which, in May 1878, there arose, in one night, on the W. side of an adjacent bay, a semicircular island of consider-

able extent, with a crater in the centre filled with boiling water.

New Caledo'nia, an island in the South Pacific Ocean, belonging to France, between 20 and 22, 30 S. and 164 and 167 E. It forms the most important penal settlement of France. The climate is fine, the soil is in many parts very fertile, and the mineral wealth is great. Area, 7722 square miles; pop. about 45,000.

Newcastle, a seaport of New South Wales, Australia, at the mouth of the Hunter River, 75 miles N. from Sydney; in the vicinity are rich coal-mines. Pop. of district, 15,595.

New Guinea, *ghin'ne*, formerly called **Papua**, a large island of the Indian Archipelago, immediately S. of the equator, and N. of Australia, from which it is separated by Torres Strait. Its length from E. to W. is about 1500 miles; its width varies from 30 miles to 400 miles; and its area is about 250,000 square miles. Little is known of it beyond the coasts. At the E. end is a large channel, named *China Strait*, which enables vessels trading between Australia and China to shorten the passage by some 300 miles. The principal rivers in the eastern half of the island are the *Fly* and the *Baxter*. Of the mountains the loftiest are *Mount Owen Stanley*, 13,205 feet; *Mount Suckling*, 11,226 feet; *Mount Obree*, 10,246 feet; *Mount Yule*, 10,046 feet; and numerous others of great altitude. The natives, a mixed race of Malay and Papuan, are in general ferocious and untractable. Those inhabiting the S.E. part of the island are being reclaimed by the efforts of European missionaries, whose principal station is *Port Moresby*.

New Hebrides, a group of islands in the South Pacific Ocean, N. of New Zealand, between 15 and 21 S. and 166 and 171 E. The most important are *Espiritu Santo, Mallicolo, Erromango, Tanna, Aurora*, and *Aneityum*. Pop. estimated at 150,000.

New Ireland, an island in the Pacific Ocean, 200 miles long, with an average breadth of 20 miles. The soil is fertile, and the hills, some of which are 2000 feet high, are covered with forests.—2, 3 S. 152 E.

New Plym'outh, the capital of the provincial district of Taranaki, S.W. of North Island, New Zealand; it is situated on the W. coast. Pop. 3310.

New South Wales. *See* REMARKS, page 400.

New Zealand. *See* REMARKS, page 401.

Norfolk Island. *See* REMARKS, page 399.

Otaheite, *o-tâ-he'te*, or **Tahiti**, *tâ-he'te*, the largest of the Society Islands, in the Indian Archipelago, belonging to France. It is about 120 miles in circumference, and consists of two peninsulas, connected by an isthmus and surrounded by coral reefs. The natives generally have been brought under the influence of Christianity by the labours of British missionaries. Pop. 13,800.—**Papiete** is the principal town.

Otag'o, a provincial district of New Zealand, forming the S. part of South Island, and bounded on the N. by the provincial district of Canterbury. It was founded in 1848 by emigrants from Scotland. Pop. 134,077.—**Dunedin** is the capital.

Owhy'hee (the hot place). *See* **Sandwich Islands.**

Padang', a Dutch settlement and fort on the W. coast of Sumatra, in the Indian Archipelago. Pop. 10,000.

Palembang', a town in the E. of the island of Sumatra, in the Indian Archipelago, extending 3 miles along the banks of the River Musi, 58 miles from its mouth in Banca Strait. Some of the houses are built on rafts anchored near the banks, and others are elevated on posts. Pop. 25,000.

Papua. *See* **New Guinea.**

Parramat'ta, next to Sydney, the largest town in New South Wales, Australia. It is distant from Sydney 14 miles. Pop. 8433.

Pelew' Islands, a group in the Pacific Ocean, between the Philippine and the Caroline Islands.—7, 30 N. 134, 45 E.

Perth, an episcopal city and capital of West Australia, picturesquely situated on the Swan River, about 12 miles above Fremantle. Pop. 5044.

Phil'ippine Islands (named after Philip II. of Spain), an extensive group at the N.E. extremity of the Indian Archipelago, lying between 5, 32 and 19, 38 N., and 117 and 127 E. They are extremely fertile, and because of high temperature and abundant moisture, are clothed with perpetual verdure. The Philippines were taken possession of by the Spaniards in 1565, and still belong to them, though various native tribes remain independent. The principal islands are *Luzon, Mindanao, Palawan, Mindoro, Samar, Zebu,*

Panay, and *Negros*. Area estimated at 120,000 square miles; pop. 6,300,000.

Pitcairn' Island, a small island in the South Pacific Ocean, inhabited by descendants of the mutineers of the "Bounty."—25, 3 S. 130, 15 E. Pop. 96.

Pontianak', the principal Dutch settlement on the S.W. coast of the island of Borneo, in the Indian Archipelago. Pop. of town and district, about 20,000.

Port Nicholson, *nik'l-sun*, an inlet on the S. coast of North Island, New Zealand.—The town of **Wellington** is on its W. shore.

Port Phil'lip, an extensive bay and harbour on the S. coast of Victoria, Australia; its length and breadth are about 40 miles each way, enclosing an area of about 800 square miles, but its entrance is only 2 miles across.

Queen Char'lotte Islands, a group of the South Pacific, between Solomon Islands and the New Hebrides.

Queensland. *See* REMARKS, page 399.

Rockhamp'ton, a town of Queensland, Australia, county of Livingstone, on the Fitzroy. Pop. 7435.

Samarang', a fortified seaport on the N. coast of Java, near the mouth of the Samarang River, with extensive commerce, but the town is unhealthy from adjoining morasses. Pop. 22,000.

Sand'hurst, a city of Victoria, Australia, formerly called Bendigo, on Bendigo Creek, famous for the gold-diggings in its vicinity. Pop. 28,662.

Sand'wich or **Hawai'ian Islands**, a group in the North Pacific, discovered by Captain Cook in 1778, xtending from 18. 50 to 22, 20 N., and from 154 to 160 W. There are eight principal islands, and five smaller They were named the Sandwich Islands after Lord Sandwich, the First Lord of the Admiralty, who consented to send out the expedition which led to their discovery. They are fertile, and abound with the productions of tropical climes. In Owhyhee or Hawaii, the largest of the islands, are the remarkable volcanoes *Mauna Loa* and *Kilauea;* the former rising to the height of 13,950 feet. In 1868 a fearful eruption of Mauna Loa desolated the island to a considerable extent. Captain Cook lost his life at Owhyhee, in 1779, through an unhappy misunderstanding with the natives; but they are in general of a mild and friendly disposition, and many of them have been converted to Christianity. Area estimated at 7630 square miles; pop. 44,000.—**Honolulu**, in Oahu Island, is the capital of the group.

Sara'wak, a country on the W. coast of the island of Borneo, in the Indian Archipelago. It yields an abundant supply of sulphide of antimony, and has cinnabar mines, opened by the Borneo Company in 1870.—Also, a town, the capital of the above, on a river of the same name, with gold-mines in the vicinity. Pop. estimated at 12,000.

Society Islands (so called by Captain Cook in honour of the Royal Society, at whose recommendation the voyage which led to their discovery was undertaken), a group in the South Pacific, of which the chief are *Otaheite* or *Tahiti*, *Raiatea*, and *Eimeo*. The soil is fertile, producing sugar, cocoa-nuts, the bread-fruit, arrowroot, etc. By the labours of British missionaries, most of the natives have been led to embrace the Christian faith, and many useful arts have been introduced. These islands now belong to France. Pop. 19,000.

Soerakar'ta, Souracar'ta, or **Surakar'ta**, or **So'lo**, the capital of a Dutch residency, near the centre of the island of Java, on the Solo River. Pop. 10,000.

Sol'omon Islands, an extensive group in the South Pacific, between 5 and 12 S. and 154 and 163 E.

Sooloo' or **Sulu Islands**, a chain of islands in the Indian Archipelago, extending from the N.E. extremity of Bornec to Mindanao, the most southern of the Philippines. The natives carry on an active commerce. Pop. 300,000.

Sourabaya, or **Soerabaya**, *soo-rä'-bi'ä*, a seaport on the N.E. coast of Java, the capital of a province of the same name, with a strong fort, a fine naval arsenal, shipbuilding docks, etc. Pop. 130,000.

South Australia. *See* REMARKS, page 400.

Stewart Island, the most southerly of the New Zealand group, separated from South Island by a strait 30 miles wide, called Foveaux Strait.

Suma'tra, a large island of the Indian Archipelago, separated from the Malay Peninsula by the Strait of Malacca, and from Java by the Strait of Sunda. It extends from N.W. to S.E., upwards of 1000 miles in length, with breadth varying from 60 to 240 miles, and is divided by the equator into two nearly equal parts. Ranges

of mountains run through the interior, *Mount Ophir*, in the central chain, rising to the height of 13,842 feet. The island produces pepper, rice, camphor, and several valuable woods, and contains mines of gold, copper, and iron. The Dutch are now masters of all the territory south of the equator. The chief native states are *Acheen*, *Siak*, the *Battah Country*, and *Menankabow*. Pop. 2,500,000.

Sun′da Islands, a group in the Malay Archipelago, comprising *Sumatra*, *Java*, *Banca*, *Billiton*, *Sumbawa*, *Bali*, *Lombok*, *Floris*, and some others extending as far east as Timor.

Sun′da, Strait of, an arm of the Indian Ocean, 90 miles long, separating Sumatra from Java.

Syd′ney (named after Viscount Sydney, a Secretary of State at the time the city was founded), the capital of the colony of New South Wales, Australia. Pop. of the city proper, 99,670; of suburbs, 120,757. *See* REMARKS, page 400.

Tarana′ki, a provincial district of North Island, New Zealand, S.W. of Auckland and N.W. of Wellington. Three-fourths of the surface is dense forest; the remainder is fern and flax land. For grass and root-crops Taranaki is unsurpassed, and the iron-sand of the sea-shore is believed to be the purest iron ore known. Pop. 14,858.—**New Plymouth**, on its N.W. coast, is the capital.

Tasmania. *See* REMARKS, page 400.

Ternate, *ter-nāt′*, or *ter-nā′tā*, an island of the Molucca group, in the Indian Archipelago, with a town of the same name at the base of a volcano 5480 feet in height. Pop. 92,291.

Tidor, *te-dor′*, an island of the Indian Archipelago, belonging to the Dutch, W. of Gilolo and S. of Ternate.

Timor, *te-mor′*, or **Timur**, *te-moor′*, an island of the Indian Archipelago, about 300 miles in length and 40 miles in breadth, the most easterly of the Sunda group; three-fourths of it belong to the Dutch, the eastern fourth belongs to the Portuguese. Pop. 1,757,000.

Timorlaut, *te-mor′lout*, a mountainous island of the Indian Archipelago, about 90 miles in length and 25 miles in average breadth, N.E. of Timor.

Tor′res Strait (named from *Torres*, the Spanish navigator, who discovered it in 1606), separates the N. extremity of Australia from Papua or New Guinea; it is 80 miles across, but is obstructed by numerous islands, shoals, and reefs.

Victoria. *See* REMARKS, page 400.

Victoria, South, a large tract of land in the Antarctic Ocean, discovered by Sir James Ross in 1841. It is the land nearest to the South Pole that is at present known. Near its N. extremity is *Mount Erebus*, an active volcano 12,369 feet high, which is believed to be the only phenomenon of the kind in the frigid zones.—72, 78 S. 173 E.

Wellington, a provincial district in the S. of North Island, New Zealand. Its chief town, **Wellington**, county of Hutt, is the seat of the government of the colony. Pop. of district, 61,371; of town and suburbs, 21,005.

West′land, a provincial district on the W. coast of South Island, New Zealand. Pop. 15,010.

West Australia. *See* REMARKS, page 400.

PALESTINE, or THE HOLY LAND,

Is bounded N. by Syria; W. by the Mediterranean Sea; S. by Arabia; E. by Arabia and Syria.

Provinces and Tribes.	Chief Towns.
	1. GALILEE.
Asher	Accho or Ptolemais, Zarephath or Sarepta, Tyre and Sidon.
Naphtali	Kedesh-Naphtali, Harosheth, Capernaum, Chorazin, Bethsaida.
Zebulun	Tiberias, Nazareth, Cana.
Issachar	Jezreel, Shunem, Aphek, Nain.



Provinces and Tribes.	Chief Towns.
	2. Samaria.
Manasseh (Half-tribe).	Cæsarea, Tirzah, Bethshan, Dothan, Endor, Megiddo.
Ephraim	Samaria, Shechem, Shiloh, Lydda, Antipatris.
	3. Judea.
Benjamin	Jerusalem, Gibeon, Mizpeh, Bethel, Jericho, Bethany, Emmaus.
Judah	Hebron, Bethshemesh, Makkedah, Tekoah, Bethlehem.
Dan	Gath, Ajalon, Ashdod, Arimathea, Joppa.
Simeon	Askelon, Gaza, Beersheba, Hormah.
	4. Beyond Jordan.
Reuben	Heshbon, Bezer, Medeba, Jahaz, Bethabara.
Gad	Ramoth-Gilead, Succoth, Peniel, Mahanaim, Mizpeh, Jabesh-Gilead.
Manasseh (Half-tribe).	Golan, Gadara, Dan, Cæsarea Philippi.

REMARKS.

From the patriarchal age down to that of the Judges, the land of the Hebrews was called Land of Canaan; during the monarchy, Land of Israel; and from the captivity to the Christian era, Judæa. The name Palestine, which originally denoted only the maritime plain of the Philistines, was extended, under Greek and Roman influences, to the whole country; and it has remained in use, along with the *Terra Sancta*, *i.e.*, Holy Land of the Middle Ages.

The area of Palestine cannot be definitely stated. The country beyond Jordan did not remain in living connexion with the Hebrew state; nor can the plain of the Philistines be properly reckoned part of it. Moreover, after the battles of the Conquest and the struggles under the early Judges, the district so conspicuous in the New Testament under the name of Galilee hardly appears in Old Testament history. At its largest, the area of Palestine may have approached that of the six northern counties of England; but the area of Judæa and Samaria together was less than that of Yorkshire alone.

On the whole, Palestine was what Montenegro is, a hill-country with a very limited sea-board. But that sea-board formed part of the only practicable land-route between the Nile and the Euphrates, between the empires of Egypt and Assyria; hence the political importance of the Hebrew state, and its temptation, which proved its ruin, to share in the quarrels of the two great competing powers. From the promontory of Carmel, which leaves but a narrow passage along the shore, there runs southward for a hundred miles a maritime plain, widening gradually out to a breadth of 15 miles, and forming one vast cornfield. The wider half to the south is Philistia. The narrower half to the north is Sharon. All

along, sand-dunes line the shore, creating marshes wherever they obstruct the drainage. Both sand and water seem to be encroaching on the plain; for Askelon in the south lies buried under sand-dunes, and Cæsarea in the north, founded by Herod the Great to be a safer landing-place than Joppa, is now a wave-swept ruin. Joppa, situated towards the south end of Sharon, remains the one seaport of the Holy Land.

The only considerable inland plain is that of Esdraelon, immediately north of the mountain-range that terminates in the promontory of Carmel. The Esdraelon plain is remarkable, not only for its extent and fertility, but also because, by narrow continuations westward to the sea, and eastward to the Jordan, it marks off from Galilee the continuous highlands of Samaria and Judæa. These highlands have an average elevation of 1500–1800 feet above the Mediterranean; and, being accessible only through rugged gorges, they form a natural stronghold. They are a bare region of limestone rock, abounding in caves. Judæa is even more of a "dry and thirsty land" than Samaria. Compared with them, Galilee, though lower, is yet, because of its greater proximity to Lebanon, a land of springs and wooded hills; and, for a like reason, the uplands beyond Jordan are clothed with permanent pasture. The eastward descent from the highlands of Judæa and Samaria leads very steeply down to the chasm of Jordan, the one permanent river of Palestine; for the others are but winter torrents. From its source on the N.W. side of Hermon or Anti-Libanus, the Jordan descends 1700 feet to the sweet "Waters of Merom," which are at the level of the Mediterranean; then it descends 682 feet to the less sweet Sea of Galilee, and 610 feet more to the bitter salt Dead Sea, the surface of which lies nearly 1300 feet below that of the Mediterranean, and the bottom about 1300 feet deeper still. No other such chasm exists on the globe; and at the southern end of the Dead Sea, notwithstanding a salt mound 5 miles long by 2½ miles broad, which rests on solid rock-salt, the chasm continues in the direction of the Gulf of Akaba. With so rapid a descent the Jordan is useless for navigation; neither is it convenient for irrigation, owing to the lie of the land on its banks. Bitumen occurs at various places in the Jordan valley, and a sulphurous crust is common on the Dead Sea shore; while in the Dead Sea itself lumps of both sulphur and bitumen have been found floating. It is not true that life is absent from the air, shores, and water of the Dead Sea. Birds do fly over it; fish are found at the inflow of the Jordan; and a recent investigator has discovered low organisms in its saltest depths.

The year is pretty equally divided in Palestine between a rainless summer and a winter of intermittent rains, snow and ice being both infrequent and slight. The course of the seasons is admirably marked out by the three great Hebrew festivals. At the Passover, in the former half of April, there was offered the first barley sheaf;

and at the Feast of Weeks, towards the end of May, a loaf of bread. Thus were marked respectively the beginning and the end of the grain harvest. Then came the great heat of summer, killing down the grass and all flowers of the field, but ripening grapes, figs, and olives, the in-gathering of which the Hebrews celebrated in the Feast of Tabernacles, about the middle of October. The highlands of Palestine are healthy; but the marshes already mentioned render portions of the coast-land pestilential, and Jordan valley is both the hottest and on the whole the most unhealthy region of all.

The Hebrew people, whose mark on the mind and heart of humanity is indelible, have left no certain trace of themselves on what was their own land. Almost every hill-top bears signs of ancient habitation; almost every hill-side bears, in dilapidated terraces, proof of ancient husbandry; cisterns, flights of stairs, and excavated tombs are frequently found; but none of these possess characteristics specially Hebrew, and no remaining edifice or part of an edifice can with certainty be assigned to a date prior to the Christian era.

EXERCISES.

What are the boundaries of Palestine? Write out the names of the twelve tribes. Which two and a half of them occupied the country beyond Jordan? Which four of them occupied the district called Galilee in the New Testament? Which four of them occupied Judæa?

Account for the name Palestine? Give in the order of time the names which the country bore before the Christian era. Why cannot the area of Palestine be definitely stated? Give, by comparison, some notion of its utmost extent. What provinces of it were together smaller than Yorkshire? What gave political importance to so small a country?

Describe the maritime plain S. of Carmel. Name its two parts. Give examples of its invasion by sand and by water. Name the one sea-port. Where is the only considerable inland plain? On what account is it remarkable? What makes the highlands of Judæa and Samaria a natural stronghold? Describe them. Compare them physically with Galilee, and with the country beyond Jordan. On which side is the steeper access to the highlands? Describe the one river of Palestine.

Distinguish between the depth of the Jordan chasm and the depth to which the Jordan itself falls. Describe the mound at the southern end of the Dead Sea. What indications are there of bitumen and sulphur? Is the Dead Sea without life?

What two seasons make up the year in Palestine? Connect the three great Hebrew festivals with three great events in the husbandman's year. Account for the words in Jeremiah viii. 20, "the harvest is past, the summer is ended." What are the effects of the great summer-heat? Distinguish between the healthy and the unhealthy parts of Palestine. What marks of occupation in ancient times are found? What monuments of the Hebrew people built before the Christian era remain?

DESCRIPTIVE TABLE.

Ab'arim, a range of rugged mountains east of the Dead Sea and the Lower Jordan. To it belong the heights of Nebo, Pisgah, Peor, and Baal. From Mount Nebo, which was the top of Pisgah, and one of the highest summits in the whole range, Moses viewed the Promised Land.

Ac'cho, or **Ptolema'is** (*Acre*), a strong city and seaport on the Mediterranean. *See* **Acre**, Descriptive Table of TURKEY in ASIA.

A'chor, a valley of Benjamin, between Jericho and Ai, where Achan was stoned to death.

Adul'lam, a city of Judah, chiefly remarkable for the cave in which David took refuge, when he fled from Gath.

Ai, a city of Benjamin, the second stronghold of the Canaanites taken by the Hebrews after their passage of Jordan.

A'jalon (*Yalo*), a town originally assigned to Dan; but the Danites could not drive the Amorites out, and Ajalon is afterwards mentioned as belonging to Judah and Benjamin. Near to it, when Joshua was in pursuit of the five kings of the Amorites, "the sun stood still upon Gibeon, and the moon in the Valley of Ajalon."

An'athoth (*Anata*), a city of Benjamin, the birthplace and abode of Jeremiah.

Antip'atris (*Kefr Saba*), in the Plain of Sharon, at the foot of the hills, the principal station on the Roman road between Jerusalem and the port of Cæsarea.

Arimathe'a, in the Tribe of Dan, the city of Joseph who begged the body of Jesus from Pilate. It has been identified with Ramah, which is named Armathaim in the Septuagint.

Ar'non (*Mojib*), a winter torrent which rises in the mountains of Gilead, on the east of Jordan, forming the northern boundary of Moab, and falling into the Dead Sea.

Ar'oer, a city of Reuben, on the Arnon, where a battle was fought between the Israelites and the Ammonites.

Ash'dod, or **Azo'tus** (*Esdud*), one of the five cities of the Philistines. In the temple of Dagon, here, the captured Ark was placed; and here Philip the Evangelist was found after he had baptized the Ethiopian eunuch.

Ash'er, the Tribe which occupied the hill country immediately behind the southern half of the Phœnician plain.

Ash'taroth, or **Ash'taroth Car'naim** (*Mezareib*), a city of Manasseh, beyond Jordan, and one of the chief cities of Og, king of Bashan.

As'kelon, or **As'calon** (*Askulan*), a strong seaport on the Mediterranean, and one of the five cities of the Philistines. It suffered much in the Jewish war with the Romans, and figured prominently during the Crusades.

Bashan, a pastoral district, extending from the "border of Gilead" on the south to Mount Hermon on the north. Its north-western corner was an oak-forest.

Beer-She'ba (*Bir-es-Seba*), a city of Simeon, which was a favourite residence of the patriarchs. The limits of the Holy Land are often expressed in Scripture as being "from Dan to Beer-sheba;" Dan being a city in the extreme north, as Beersheba was a city in the extreme south.

Ben'jamin, the Tribe which occupied the country north of Judah towards Jordan.

Ber'achah, a valley of Judah, in the Wilderness of Tekoah.

Be'sor, a brook which rises in Judah, and falls into the sea near Gaza.

Bethab'ara, a town of Reuben, on the Jordan, at a spot where that river was fordable. Here John baptized.

Beth'any, a village of Benjamin, about two miles east of Jerusalem, beyond the Mount of Olives, the abode of Lazarus and his sisters. Here Lazarus was raised from the dead; and here Jesus ascended from among his disciples into heaven.

Beth'el (*Beitin*), a city of Benjamin, originally called Luz, the scene of Jacob's vision.

Bethho'ron, the name of two towns in the S. of Ephraim, distinguished as Upper and Nether; between them was a pass, down which the five kings of the Amorites were driven by Joshua. Both were fortified by Solomon.

Beth'lehem (*Beit Lahm*), a city of Judah, about six miles south of Jerusalem, called also Ephratah and Bethlehem-Judah. It was the birthplace of David, and of Jesus, David's son.

Beth'phage, a village at the foot of the Mount of Olives, between Bethany and Jerusalem.

Bethsal'da, a town of Galilee, on the west side of the Sea of Tiberias. It was the birthplace of Peter, Andrew, and Philip, and the frequent abode of Jesus.

Bethsal'da, or Jul'ias, on the east side of Jordan, near its influx into the Sea of Tiberias, where Christ fed the five thousand.

Beth'shan, or Scythop'olis (*Beisan*), a city of Western Manasseh, forming an *enclave* within the territory of Issachar, near the Jordan. The body of Saul was fastened to the walls of Bethshan by the Philistines, whence the men of Jabesh-Gilead took it down and carried it away.

Beth'shemesh (*Ain Shems*), a city of Judah, many of the inhabitants of which were struck dead for looking into the Ark.

Be'zer, in Reuben, one of the three cities of refuge beyond Jordan.

Cæsare'a, or Cæsarea of Palestine (*Kaisariyeh*), a city and seaport on the Mediterranean, built by Herod the Great. It became the Roman metropolis of Palestine, and the residence of the proconsul. Here Peter baptized Cornelius and his kinsfolk; here abode Philip the Evangelist; here Paul found refuge in Roman custody from his fellow-countrymen of Jerusalem, pleading his cause before Felix and Festus, and finally appealing to Cæsar rather than return to Jerusalem, to be judged by Festus there.

Cæsarea Philip'pi, originally called **Paneas** (*Banias*), a city of Upper Galilee, at the foot of Mount Lebanon. The city was much enlarged and beautified by Philip the Tetrarch, who called it Cæsarea in honour of the emperor Tiberius.

Ca'na, a small town of Galilee, north of Nazareth, where Jesus performed his first miracle, by turning water into wine.

Caper'naum, a city of Galilee, on the west side of the Lake of Gennesareth, and more than any other place the abode of Jesus after he commenced his public work.

Car'mel, Mount, a range of hills bounding the Plain of Esdraelon on the south-west, and ending in a promontory which separates from each other the maritime plains of Sharon and Accho. Oaks and pines crown the summit of Carmel, which rises 1700 feet above the Mediterranean. Olives and laurels clothe the lower slopes.

Che'rith, a brook from which Elijah was supplied with water during the time he was fed by ravens; it flowed through the Plain of Esdraelon into the Jordan.

Chora'zin, a town of Galilee on the west coast of the Lake of Gennesareth, near Capernaum.

Dan, the Tribe which drew the last lot of all, a fertile tract in which the plains of Philistia and Sharon meet. The difficulty was to give effect to the allotment.

Dan, originally called **La'ish**, a city at the northern extremity of Canaan, which a band of Danites, unable to get lands in their own lot, took by force, and retained.

Dead Sea, called in Scripture the *Salt Sea*, the *Sea of the Plain*, and the *East Sea*. It is also called the *Lake* or *Sea of Sodom*, and by Josephus *Lake Asphaltites*, that is, the bituminous lake. Its greatest length is fifty miles, its general breadth from ten to twelve miles, its area 360 miles. *See* REMARKS, page 414. Near to its northern end stood the four cities of the plain which were consumed by fire from heaven.

Do'than, a city of Western Manasseh, about 12 miles north of Samaria. Here Joseph's brethren were tending their flocks, when they sold him to the passing Ishmaelite merchants.

E'bal, Mount. *See* **Gerizim.**

Ed'rei (*Edhra*), a town of Eastern Manasseh. Here Og, king of Bashan, was defeated by the Israelites, so that he lost his kingdom.

Ek'ron (*Akir*), the chief of the five Philistine cities. The Ekronites were the first who proposed to send back the Ark, in order to be delivered from the calamities which its presence caused.

E'lah, a valley about eleven miles S.W. from Jerusalem, in which the Israelites were encamped when David slew Goliath.

Emma'us, a village of Benjamin, 7½ miles N.W. from Jerusalem, on the way to which Jesus conversed with two of his disciples on the evening of the day of his resurrection.

En'dor, a town of Western Manasseh, forming an *enclave* within the territory of Issachar, where dwelt the witch consulted by Saul on the eve of the battle in which he perished.

En'gedi (*Ain Jidy*), a fountain and village about midway on the western shore of the Dead Sea.

E'phraim, the Tribe which competed with Judah in power. The territory of Ephraim was the most central of all. It contained *Jacob's* well, and his "parcel of ground" at Shechem; Gerizim and Ebal, the mounts of blessing and cursing; the patrimony and tomb of Joshua; and Shiloh, where the ark remained from the time of Joshua to that of Eli.

E'phraim, the Wood of, east of Jordan, not far from Mahanaim, where Absalom, caught by his long hair in the branches of a tree, was despatched by Joab.

Esdrae'lon, or Jezreel, Plain of, a frequent battlefield, bounded on the S.W. by the Carmel range. *See* REMARKS, p. 413.

Esh'col, the Valley of, is situated at a short distance from Hebron, on the way to Jerusalem. Here Caleb and Joshua, while exploring the country, obtained the fine cluster of grapes which they took back with them, "borne on a staff between two," as a specimen of the fruits of the Promised Land.

Esh'taol, a city of Dan. *See* **Zorah.**

Ga'ash, a hill in the Tribe of Ephraim, on the north side of which stood Timnath Serah, where Joshua was buried.

Gad, the Tribe whose territory, situated beyond Jordan, lay between Reuben and Eastern Manasseh.

Gad'ara (*Um-keis*), a strong city beyond Jordan, near the southern extremity of the Lake of Gennesareth. It was one of the ten cities known as Decapolis, and is called by Josephus capital of Perea.

Gal'ilee, the northern division of Palestine, on this side Jordan, divided into Upper and Lower. Upper Galilee was also called Galilee of the Nations, or of the Gentiles.

Gal'ilee, Sea of. *See* **Gennesareth, Lake of.**

Gath, one of the five cities of the Philistines. Goliath was a native of Gath, and David fled, for fear of Saul, to Achish its king.

Gath-he'pher, a town of Zebulun, the birthplace of Jonah.

Ga'za, one of the five cities of the Philistines, mentioned, like Damascus, both in Genesis and in the Acts of the Apostles. The secret of its lasting importance lies in its position as the frontier coast-town between Syria and Egypt. At the present day, its olive-groves enable it to manufacture immense quantities of soap; and it drives an active trade in corn.

Gennes'areth, Lake of, called also the *Sea of Galilee*, the *Sea of Tiberias*, and in the Old Testament the *Sea of Chinnereth* or *Chinneroth*. It lies deep among hills and mountains, and is accordingly liable to squalls. Its length is nearly 14 miles, its greatest breadth 8 miles. The waters abound with fish.

Ger'izim, Mount, a mountain of Ephraim, over against Mount Ebal; between them is situated the city of Shechem. On Gerizim stood the six tribes who pronounced blessings on those who should keep the law: on Ebal stood the six tribes who pronounced curses on those who should break it. Gerizim became the seat of the religious worship of the Samaritans, who erected a temple upon it.

Gethsem'ane, Garden of, at the foot of the Mount of Olives, beyond the brook Kidron. Here Jesus spent in agony the night before his crucifixion. Eight venerable olive trees mark the site.

Gib'eah (*Jeba*), a city of Benjamin, the birthplace of Saul, and his residence after he became king, hence sometimes called Gibeah of Saul.

Gib'eon (*El Jib*), a city of Benjamin, 5 miles N.W. of Jerusalem. At the time of the conquest by Joshua, the original inhabitants saved themselves and their city by making friends guilefully with the children of Israel (Joshua ix. 3–15). Here it was that Solomon dreamt the dream in which he asked wisdom of God, and obtained, besides wisdom, riches and honour, and, on condition of obedience, the promise of long life also.

Gil'boa, a ridge which bounds the plain of Esdraelon on the south-east, memorable for the defeat of Saul by the Philistines, when his three sons were slain, and he himself died by his own hand.

Gil'ead, a mountainous tract beyond Jordan, extending from Mount Hermon southward to the sources of the brooks Jabbok and Arnon. It abounded in rich pastures and aromatic simples.

Gil'gal, a place east of Jericho, where the Israelites formed their first encampment after crossing the Jordan, and set up the twelve stones which they had taken out of the bed of the river.

Go'lan, in Eastern Manasseh, one

of the three cities of refuge beyond Jordan.

Gomor'rah. *See* **Sodom.**

Hach'ilah, a hill in the south of Judah, where David hid from Saul.

Ha'dad-rim'mon, a place in the Tribe of Issachar, in the valley, or rather gorge, of Megiddo, where Josiah, king of Judah, was slain, and his army defeated, by Pharaoh-Necho, king of Egypt.

Ha'reth, a forest in the Tribe of Judah, to which David withdrew before the fury of Saul.

Harosheth of the Gentiles, a city of Naphtali, near Lake Merom, the residence of Sisera, general of Jabin, king of Hazor.

Ha'zor, a fortified city, the capital of Jabin, a powerful Canaanitish king who was defeated and slain by Joshua. Hazor fell to the lot of Naphtali.

He'bron (*El Khulil*), anciently called **Arba** or **Kirjath-arba,** high up among the mountains in Judah, 18 miles south of Jerusalem, one of the three cities of refuge on this side Jordan. Here David set up his throne, and dwelt during the seven and a half years that he reigned over Judah alone. The Mohammedans believe that the cave of Machpelah, in which Abraham, and Sarah, and Isaac were buried, is under the pavement of the great mosque in the Hebron of to-day. Present pop. 5000.

Her'mon, Mount, by the Sidonians called **Sirion** (*Jebel-esh-Sheikh*), is the highest part of Anti-Libanus, if indeed it be not coextensive with that range. It has three summits, distant from one another only a quarter of a mile, and all about 10,000 feet high. After Lebanon itself, they are the highest mountains in Syria.

Hesh'bon (*Hesban*), a city of Reuben beyond Jordan, the capital of Sihon, king of the Amorites. Ruins of it, about a mile in circuit, remain.

Hin'nom, Valley of, a deep and narrow ravine on the south and west sides of Jerusalem.

Hor'mah, originally called **Zephath,** the capital of a Canaanitish king in the south of Palestine, who was conquered by Joshua. It was in Simeon, but is also mentioned as belonging to Judah; because the territory of the former came to be regarded as a parcel of the latter.

Is'sachar, the Tribe whose territory comprehended the plain of Esdraelon, the granary of Palestine.

Jab'bok (*Zurka*), a brook tributary to Jordan, on the east side of that river. It separated the kingdom of Sihon, king of the Amorites, from that of Og, king of Bashan.

Ja'besh, or Jabesh-Gilead, a city of Eastern Manasseh, in the Land of Gilead. It was sacked by the Israelites for refusing to join in the war against Benjamin (Judges xxi. 8–14).

Ja'zer, a city of Gad, beyond Jordan, one of the Levitical cities.

Jehosh'aphat, Valley of, the deep ravine which separates Jerusalem from the Mount of Olives.

Jer'icho, a city of Benjamin, the first stronghold of the Canaanites taken by the Hebrews after their passage of Jordan. Though Joshua then razed it to the ground, and pronounced a curse on whoever should rebuild it, yet it became afterwards a school of the prophets; and, at the commencement of the Christian era, it was a city second only to Jerusalem in Palestine. It was destroyed during the Mohammedan conquest; and now it is a wretched village without one of those trees which entitled it anciently to be called "City of Palms."

Jeru'salem, identified by Josephus with the Salem of Melchizedek. It was situated on the confines of Judah and Benjamin, and was so strongly fortified by nature and art, that the Jebusites, its original possessors, were not completely dislodged till the time of David. The mosque of Omar stands on the site of Solomon's Temple. Notwithstanding the doubts which modern investigation has thrown upon the accuracy of traditional identifications, about 10,000 pilgrims annually visit Jerusalem for the sake of its Holy Places. Chief of these is the Church of the Holy Sepulchre, used by all Christian communities in common, a Turkish guard maintaining order. The chief industry of the place is the manufacture of what is called *Jerusalem ware*, crosses, crucifixes, rosaries, and the like. The present population is about 25,000, nearly one-half of whom are Jews.

Jez'reel (*Zerin*), a city of Issachar, built on a gentle swell at the east end of the plain of Esdraelon. King Ahab made it his chief residence. Here was the vineyard of Naboth which Ahab coveted; and here Jezebel met her fate.

Jez'reel, Plain of. *See* **Esdraelon.**

Jop'pa, or Ja'pho (*Jaffa*), a town on the Mediterranean, the port of Jeru-

salem. It belonged to the portion of Dan. *See* REMARKS, page 414.

Jor'dan, the one permanent river of Palestine, rises in Anti-Libanus, flows due south through Lakes Merom and Gennesareth, and after a total course of about 100 miles, falls into the Dead Sea. Immediately above its mouth it is fordable when not in flood, the depth there being not more than four feet.

Judæ'a, the southern province of Palestine in New Testament times.

Judæ'a, Wilderness of, a region lying S.E. of Jerusalem towards the Dead Sea.

Ju'dah, the Tribe whose territory extended westward from the Dead Sea to the borders of Philistia and Simeon, and southward from it, but in a narrow strip. The kingdom of Judah included, besides the above territory, the portions of Simeon, Dan, and Benjamin.

Ka'desh, or **Kadesh-Bar'nea**, a city on the S.E. border of Palestine, where Miriam, the sister of Moses, died, and was buried.

Ka'nah, a brook which falls into the Mediterranean, separating in its course the tribes of Ephraim and Western Manasseh.

Ke'desh, in Naphtali, one of the three cities of refuge on this side Jordan.

Ki'dron, or **Ce'dron**, a brook flowing through the valley of Jehoshaphat, on the east side of Jerusalem, between that city and the Mount of Olives.

Kir'jath-je'arim, a city of Judah, to which the Ark was brought from Bethshemesh, and where it remained twenty years, till removed to Jerusalem by David.

Ki'shon, a winter torrent of central Palestine, which flows westward from the main watershed of the country to the Mediterranean. It flows along the south side of the plain of Esdraelon, and issues thence by a very narrow pass into the maritime plain of Acre. The fountains at the foot of Carmel make its stream permanent during the last few miles of its course.

La'chish, a city of the Amorites, taken immediately after Libnah. It was allotted to Judah.

Leb'anon, a group of mountains extending from the neighbourhood of Sidon on the W. to the vicinity of Damascus on the E. It is divided into two masses by the long and narrow valley of Cœle-Syria, through which flows the River Litany, the ancient Leontes. The western mass is known by the name of Libanus, and the eastern—"Lebanon toward the sun-rising" (Josh. xiii. 5)—by that of Anti Libanus. In Anti-Libanus rise, besides the Jordan, Abana and Pharpar, the rivers of Damascus. Lebanon was never conquered by the Israelites: during the Jewish monarchy, it seems to have belonged to the Phœnicians. The seaward slopes support at the present day a numerous population, thrifty and hardy: Maronite Christians in the north, and Druses, whose religion is a mixture of Judaism, Christianity, and Mohammedanism, in the south. This lofty region of terraced hill-sides comes quite up to the description of the Promised Land in Deut. viii. 7, 8. *See* REMARKS, page 414.

Lib'nah, a city in the maritime lowland of Judah.

Lyd'da, or **Dios'polis** (*Lud*), a town situated 9 miles from Joppa, on the more northern of the two roads leading from that seaport to Jerusalem.

Mag'dala, a town on the west side of the lake of Gennesareth, the probable birthplace of Mary Magdalene.

Mahana'im, a place so named by Jacob (Gen. xxxii. 2). It is afterwards mentioned as a city on the frontier line of Gad and Eastern Manasseh. There it was that Abner had Ishbosheth crowned.

Makke'dah, a city of Judah, with a cave outside, which gave refuge to the five confederate kings, after Joshua had raised their siege of Gibeon, and became their tomb, after Joshua had brought them out and hanged them.

Mam're, a plain near Hebron, with a notable oak-tree (*terebinth*), under which Abram dwelt.

Manas'seh, the Tribe whose territory consisted of two non-continuous portions, on opposite sides of Jordan, distinguished as Eastern and Western Manasseh.

Ma'on, a town of Judah, E. of Hebron, which gave name to a wilderness where David hid from Saul in the near neighbourhood of churlish Nabal.

Med'eba, a town of Reuben, beyond Jordan, where Joab gained his victory over the Ammonites and their allies.

Megid'do, a town belonging to Western Manasseh, though within the limits of Issachar. It was situated on the southern edge of the plain of Esdraelon, and commanded one of the passes from the north into the hill

country. Here king Josiah was slain fighting against Pharaoh-Necho, king of Egypt.

Me'rom, Waters of (*Huleh*), the Semechonitis of Josephus, is the upper lake in the course of the Jordan. A plain on its south-western margin is the only spot which could have been the site of Joshua's victory over the confederated Canaanitish kings.

Mich'mash (*Mukhmas*), a town of Benjamin, where Saul and Jonathan routed the Philistines.

Miz'pah, or Miz'peh, a city of Benjamin, where assemblies of the people were often held. In one of these assemblies Saul was chosen king. Towns of the same name, but of less note, were, one in Moab, where David committed his parents to the care of the Moabitish king; and one in the maritime plain of Judah, grouped with Lachish, Eglon, and other towns in that neighbourhood.

Mo'reh, Plain of, between Mounts Ebal and Gerizim.

Mori'ah, Mount, traditional name of the hill in Jerusalem on which Solomon's Temple was built.

Na'in, a town of Issachar, near Mount Tabor, where Jesus raised the widow's son to life.

Naph'tali, the Tribe whose territory lay between Asher and Eastern Manasseh, a land of wooded hills and fertile valleys.

Naz'areth, a town of Lower Galilee, situated among the hills by which the southern ridges of Lebanon sink into the plain of Esdraelon. Here, for the most part, did Jesus dwell before beginning his public work. The Nazareth of to-day belongs to the better class of eastern villages, with a population of 3000–4000.

Ne'bo, Mount. *See* **Abarim.**

O'lives, Mount of, lies to the E. of Jerusalem, from which it is separated by the valley of Jehoshaphat. It is a ridge about a mile in length, round the southern end of which winds the usual road to Bethany. The Church of Ascension on the top of it is 2724 feet above the Mediterranean, but only 295 feet above the Temple rock, and only 187 feet above what is now called Mount Zion. The spectator in Jerusalem is struck, not with the height of the Mount of Olives, but with its nearness, so narrow is the Jehoshaphat ravine and so clear is the air.

Pal'estine. *See* REMARKS, page 413.

Pen'iel, or Pen'uel, a place beyond Jordan, near the brook Jabbok, so named of Jacob—Face of El—"for I have seen Elohim face to face."

Pere'a, in Roman times the name of a province beyond Jordan, nearly corresponding to the lots of Gad and Reuben.

Pis'gah. *See* **Abarim.**

Ptolema'is. *See* **Accho.**

Rab'bath, or Rab'bath-Am'mon, the capital of the Ammonites, situated on the edge of the Arabian desert. It was at the siege of this place under Joab, that, by a wicked device of David's, the brave and faithful Uriah was slain.

Rab'bath-Mo'ab, or Ar, the capital of the Moabites, situated on the highlands S. of the River Arnon.

Ram'ah (*Er-Ram*), a town of Benjamin, 5 miles N. of Jerusalem. It was the scene of a massacre referred to by Jeremiah (xxxi. 15), whose language is adapted in Matt. ii. 18, to the slaughter of the Innocents.

Ra'moth, or Ra'moth-Gil'ead (*Jelaad*), a strong town of Gad, and one of the three cities of refuge. Here Ahab was killed, when endeavouring to recover the city from the Syrians.

Reph'aim, Valley of, or the Giant's Valley, situated somewhere in the neighbourhood of both Adullam and Bethlehem. It was the scene of David's victories over the Philistines.

Reu'ben, the Tribe which occupied the fine pasture-land between the Dead Sea and the Arabian desert.

Rim'mon, Rock of, a natural fastness in Benjamin, the refuge of the six hundred Benjamites who escaped the slaughter of Gibeah (Judges xx.)

River of Egypt, a winter-torrent, which is the boundary between Palestine and Egypt on the Mediterranean coast-line. Its modern name is Wady-el-Arish, from the village at which it flows into the Mediterranean.

Salt Sea. *See* **Dead Sea.**

Salt, Valley of, at the south end of the Dead Sea.

Sama'ria, the middle province of Palestine in New Testament times.

Sama'ria, in Ephraim, the capital of the kingdom of Israel, or of the Ten Tribes. It was named after Shemer, the original proprietor of the hill on which it was built (1 Kings xvi. 24). Its capture by Shalmaneser, king of Assyria, put an end to the kingdom of the Ten Tribes; and in the course of subsequent troubles it was almost entirely de-

molished. Herod the Great, on rebuilding it, called it Sebaste, a name retained by the village which now occupies the site.

Sarep'ta, or **Zar'ephath** (*Surafend*), a city of Asher, on the sea-coast between Tyre and Sidon. The widow of Sarepta is famous through the wonders worked in her household by Elijah.

Sha'ron, Vale of, a plain along the Mediterranean coast. *See* REMARKS, page 413.

Sha'veh, a valley, called also the King's Dale, of which the locality is unknown.

She'chem, or **Sy'char**, called also **Neap'olis** (*Nablous*), a city of Ephraim, between Mounts Ebal and Gerizim, and one of the three cities of refuge on this side Jordan. The name was changed to Neapolis by Vespasian, under whom Shechem was rebuilt. The views from the town, which lies on the Gerizim side of the valley, have been likened to those of Heidelberg. In the neighbourhood both Jacob's well and Joseph's tomb are pointed out. The present population is about 5000, mostly Mohammedans. The 150 Samaritans and the few Jews in the place keep up the old enmity.

Shi'loh (*Seilun*), a city of Ephraim, situated on a hill about 12 miles N. of Bethel. On the completion of the conquest under Joshua, the ark was removed to Shiloh, and there it remained till the Philistines carried it off, an event which broke old Eli's heart, so that he died.

Shu'nem (*Solam*), a city of Issachar, to the S. of Mount Tabor. Here was the first encampment of the Philistines prior to their battle with Saul at Gilboa. Here too abode the Shunammite woman with whom Elisha lodged.

Sid'dim, Vale of, "which is the salt sea" (Gen. xiv. 3). Here Chedorlaomer and his allies defeated the kings of Sodom, Gomorrah, Admah, Zeboim, and Bela, and took Lot prisoner. The battlefield probably lay north-west of the Dead Sea.

Si'don (*Saida*), anciently one of the two chief seaports of Phœnicia, now a town of only about 5000 inhabitants.

Sim'eon, the Tribe which occupied the corner of Palestine lying S.W. of Judah.

Sod'om, that one of the cities of the plain in which Lot dwelt.

So'rek, a valley of the Philistines, where Delilah dwelt.

Suc'coth, a town of Gad, beyond Jordan. Here Jacob, on his return from Mesopotamia, "built him an house, and made booths for his cattle."

Ta'bor (*Jebel Tur*), an isolated hill N.E. from the plain of Esdraelon. The view from the summit, which is a level plain 1800 feet high, is beautiful and extensive. Tabor was at one time supposed to have been the scene of the transfiguration.

Teko'ah, a city of Judah, south of Bethlehem, on the borders of the desert to which it gave name. It was the birthplace of the prophet Amos, and the abode of the wise woman who interceded for Absalom.

The'bez (*Tubez*), a city of Ephraim, at the siege of which Abimelech was killed.

Tibe'rias (*Tabaria*), a city of Zebulun, on the western shore of the Lake of Gennesareth, which is also called Sea of Tiberias. It was built by Herod Antipas, and named in honour of the Emperor Tiberius. The modern town stands close to the lake upon a plain surrounded by mountains; and is celebrated for its hot baths.

Tim'nath (*Tibneh*), a city of Dan, long in the possession of the Philistines; this was the birthplace of Samson's bride, and here Samson held his marriage-feast.

Tir'zah, a city of Western Manasseh, pleasantly situated N.E. of Samaria. Jeroboam made it the capital of his kingdom, a rank which it retained till Omri founded the city of Samaria.

Tyre (*Sur*), a city and seaport of Phœnicia, allotted to Asher, but never possessed by that tribe. It was besieged in vain by the Assyrian Shalmaneser for five years; but it was taken by Nebuchadnezzar, king of Babylon, after a siege of thirteen years. In B.C. 333, Tyre was attacked by Alexander the Great; it held out seven months, and was at length taken only by means of a mole which Alexander built from the mainland to the island on which Tyre stood, so as to make it accessible to land forces. It is now a heap of ruins, among which a few poor people find shelter.

Zeb'ulun, the Tribe which occupied the country between Naphtali and Issachar.

Zik'lag, a city in the lot of Simeon, but subject to the Philistines. Achish, king of Gath, gave it to David when

David took refuge with the Philistines; afterwards it belonged to Judah.

Ziph, a city of Judah, east of Hebron, giving name to the neighbouring wilderness.

Zo'ar, also called **Bela**, one of the five cities of the plain of Siddim. It was doomed with the rest to destruction, but was spared at the intercession of Lot, as a place to which he might escape.

Zo'rah (*Surah*), a village in Dan, the birthplace of Samson. Between Zorah and the neighbouring village of Eshtaol was the camp of Dan, in which Samson was reared; also Samson's grave.

THE TERRESTRIAL GLOBE.

The artificial terrestrial globe is a representation of the figure of the earth, on which are delineated the different kingdoms, seas, lakes, islands, etc., with the circles necessary for determining the position of places on its surface, and for several other purposes.

The globe, suspended on an axis, revolves in a brass ring. called the Universal or Brass Meridian, and is supported on a wooden frame, the upper surface of which is flat. It divides the globe into two hemispheres, and represents the rational horizon of any place which lies in the zenith. The axis, on which the globe turns, represents the imaginary axis or line round which the earth performs its diurnal revolution.

At the north pole there is placed a small brass circle, divided into 24 equal parts to represent the hours of the day; hence it is called the Horary or Hour Circle. On the best globes the horary circle is movable, so that any hour may be brought to the meridian, which serves as an index; where the horary circle is fixed, it has a movable index, which may be brought to any hour.

The globe is furnished with a pliable slip of brass, divided from 0° to 90° in one direction, and from 0° to 18° in the other. It has a notch and screw, by which it may be fixed to the universal meridian in the zenith of any place, and as it turns round on a pivot, it supplies the place of vertical circles, and is therefore called the Quadrant of Altitude.

On the globe itself are drawn several circles, such as the Equator or Equinoctial Line, the Ecliptic, the Arctic and the Antarctic Circles, the Tropics of Cancer and of Capricorn, as well as parallels of latitude at equal distances, and meridians generally at the distance of 15 degrees from each other.

The brass meridian is divided into degrees and parts of a degree, and is numbered on the upper half from 0° at the

equator both ways to 90° at the poles; and on the under half from 0° at each pole to 90° at the equator.

The equator is divided into degrees and parts, which are numbered both eastward and westward from the first meridian. It is also divided into 24 equal parts, to represent the hours of the day. The equator divides the globe into two equal parts, called the northern and the southern hemispheres.

The horizon is divided into degrees, etc., and numbered from 0° at the poles both ways to 90° on the east and west points, and also from 0° at these points to 90° at the poles. Besides these divisions, there are likewise marked the 32 points of the compass, the 12 signs of the ecliptic subdivided into degrees, etc., and the days of the 12 calendar months, answering to each degree of the sun's place in the ecliptic.

The ecliptic is divided into 12 equal parts, called Signs, and each sign is subdivided into 30 degrees. The names of the signs and the characters which represent them are:—Aries, the Ram ♈; Taurus, the Bull ♉; Gemini, the Twins ♊; Cancer, the Crab ♋; Leo, the Lion ♌; Virgo, the Virgin ♍; Libra, the Balance ♎; Scorpio, the Scorpion ♏; Sagittarius, the Archer ♐; Capricornus, the Goat ♑; Aquarius, the Water-bearer ♒; Pisces, the Fishes ♓. The first six signs lie in the northern hemisphere, and are called the Northern Signs; the last six lie in the southern hemisphere, and are called the Southern Signs.

The ascending signs begin at 0° Capricorn, the most southerly point of the ecliptic, and end at 30° Gemini, the most northerly; the other six are called the descending signs.

PROBLEMS TO BE SOLVED BY THE TERRESTRIAL GLOBE.

PROB. I.—*To find the latitude of a place.*

RULE.—Bring the place to the graduated edge of the brass meridian;—the degree of the meridian over it, north or south from the equator, shows the north or south latitude of the place.

EXERCISES.—What are the latitudes of London, Paris, Madrid, Rome, Lisbon, Edinburgh, Dublin, Vienna, Constantinople?—Ans. 51° 30′;—48° 50′;—40° 25′;—41° 54′;—38° 42′;—55° 57′;—53° 23′;—48° 12′;—41° 0′ all north.

What are the latitudes of the Cape of Good Hope, Candy, Bombay, Madras, Calcutta, Pekin, Sydney, Valparaiso, Lima, Bogota, Rio Janeiro, Buenos Ayres, Cape Horn, Sierra Leone, Gondar, Cairo?

PROB. II.—*To find the longitude of a place.*

RULE.—Bring the place to the edge of the meridian;—the degree of the equator cut by it shows the longitude of the place east or west from Greenwich, the first meridian on British maps.

Ex.—What are the longitudes of St Petersburg, Calcutta, Naples, Pekin?—Ans. 30° 19′ E.;—88° 17′ E.;—14° 15′ E.; and 116° 28′ E.

What are the longitudes of Cairo, Cape Town, St Helena, Amarapoora, Mexico, Rio Janeiro, Kingston in Jamaica, Sikokf, Juan Fernandez, Quebec, Lima, Valparaiso, Constantinople, Panama, Jerusalem?

PROB. III.—*The longitude and latitude of a place being given, to find that place.*

RULE.—Bring the given longitude to the meridian;—under the given degree of latitude on the meridian is the place required.

Ex.—What places are situated in 31° 15′ E. long. and 30° 2′ N. lat.? in 18° 29′ E. long. and 34° 22′ S. lat.? in 59° 45′ W. long. and 13° 15′ N. lat.? —Ans. Cairo, Cape of Good Hope, Barbadoes.

What places are situated in 44° 28′ E. long. and 56° 19′ N. lat.? in 57° 35′ W. long. and 25° 15′ S. lat.? in 27° 15′ W. long. and 38° 40′ N. lat.? in 57° 28′ E. long. and 20° 9′ S. lat.? in 3° 42′ W. long. and 40° 25′ N. lat.? in 113° 34′ E. long. and 22° 12′ N. lat.? in 151° 13′ E. long. and 33° 51′ S. lat.? in 82° 22′ W. long. and 23° 9′ N. lat.? and in 149° 30′ W. long. and 17° 29′ S. lat.?

PROB. IV.—*To find the difference of latitude and the difference of longitude between any two given places.*

RULE.—Find the latitudes of the two places, and take the difference or the sum of these according as they lie on the same side or on different sides of the equator. The difference of longitude is the difference or the sum of the longitudes of the two places according as they lie on the same side or on different sides of the first meridian.

Ex.—What are the difference of latitude and the difference of longitude between Edinburgh and Cairo?—Ans. diff. of lat. 25° 51′; diff. of long. 34° 37′.

Find the difference of latitude and also of longitude between Edinburgh and Montreal, Mexico, Rio Janeiro, Valparaiso, Pekin, Calcutta, Bombay, and the Cape of Good Hope. Find the difference of latitude and also of longitude between Paris and St Petersburg, Vienna; Sydney, Madras, Peshawar, Ispahan, Gondar, Timbuctoo, and Morocco.

PROB. V.—*To find the distance between any two places on the globe.*

RULE.—Lay the quadrant of altitude over the two places, and mark the number of degrees between them. When the distance is more than 90°, stretch a thread from the one place to the other, and measure the distance on the equator.

Ex.—What is the distance between Quebec and Rio Janeiro? Rome and London? Calcutta and the Cape of Good Hope? The Cape of Good

Hope and London?—Ans. 74° or 5115 miles; 12¾° or 881 miles,—88¼° or 6110 miles; and 88¼° or 6110 miles.

What is the distance between Pekin and London? St Petersburg and the North Cape in Kamtschatka? Paris and Cairo? Calcutta and Valparaiso? Buenos Ayres and Cape Town, measured east and west? Edinburgh and New York? Amsterdam and Batavia? Copenhagen and Trincomalee? London and Sierra Leone? Alexandria and the Cape of Good Hope? Cape Mogadore and Suez?

PROB. VI.—*The hour at any place being given, to find what hour it is at any other place.*

RULE.—Bring the place at which the hour is given to the meridian, set the index to that hour, then turn the globe until the other place comes to the meridian,—and the index will show the hour at that place. If the place where the hour is required be to the east of that of which the hour is given, then the hour will be later in the day, otherwise it will be earlier.

EX.—When it is noon at Edinburgh, what is the time at Lima, Mecca, and Canton? When it is 6 o'clock A.M. at London, what o'clock is it at Sydney, Cape Comorin, and Cape Horn?—Ans. 7h. 5′ M.;—2h. 55′ A.;—7h. 45′ A.;—4h. 5′ A.;—11h. 11′ M.;—and 1h. 31′ M.

When it is noon and 4 o'clock at London, what are the hours at Pekin, Calcutta, Cairo, Constantinople, Quebec, Mexico, Rio Janeiro, and Ispahan? When it is 8½ P.M. and midnight at Jerusalem, what are the hours at London, Petersburg, Paris, Berlin, the Azores, St Helena, the Mauritius, Penang or Prince of Wales Island, Nankin, Sydney, and Nootka Sound?

PROB. VII.—*To rectify the globe for the latitude of any place.*

RULE.—Elevate the north or south pole above the horizon as many degrees as are equal to the latitude of the place.

EX.—Rectify the globe for Edinburgh, London, Paris, Lisbon, Buenos Ayres, Madras, Pekin.—Ans. Elevate the N. Pole 55° 57′,—51° 30′,—48° 50′,—38° 42′;—the S. Pole 34° 35′;—the N. Pole 13° 4′, and 39° 54′ above the horizon.

Rectify the globe for Melville Island, Petersburg, Cairo, Cape Town, Valdivia, Mecca, Ispahan, Tobolsk, Delhi, Sydney, Sagalien Oola, Bencoolen, Sierra Leone, Paramatta, and Berlin.

PROB. VIII.—*To find the sun's place in the ecliptic for any given time.*

RULE.—Find the day of the month on the wooden horizon,—and opposite to it, in the adjoining circle, are the sign and degree of the ecliptic in which the sun is for that day; find the same sign and degree of the ecliptic on the globe—and that is the sun's place in the ecliptic.*

EX.—What are the sun's places on the 1st January, the 20th March, the 24th December, the 21st June, and the 23d September?—Ans. ♑ 10° 15′;—♓ 29° 30′;—♑ 2° 15′;—♊ 29° 30′;—and ♍ 30°.

What are the sun's places on the 1st and 15th day of each month of the year?

* This problem may likewise be performed on the celestial globe.

PROB. IX.—*To find at what hour the sun rises and sets, and the length of the day and night, at any place not in the frigid zones, on a given day.*

RULE.—Rectify the globe for the latitude of the place, find the sun's place in the ecliptic for the given day, and bring it to the meridian; set the Index to XII., and turn the sun's place to the eastern edge of the horizon,—the index will show the hour of rising; then bring it to the western edge of the horizon,—the index will show the time of setting. The hour of sunrise, doubled, gives the length of the night; and the hour of sunset, doubled, gives the length of the day.*

EX.—At what times does the sun rise and set at Dublin, Archangel, Gibraltar, and the Cape of Good Hope, on the 15th June? And what are the lengths of the day and night at those places?—Ans. Rises 3h. 35′ M., sets 8h. 25′ A.;—rises 1h. 40′ M., sets 10h. 20′ A.;—rises 4h. 45′ M., sets 7h. 15′ A.;—rises 7h. 5′ M., sets 4h. 55′ A.

At what times does the sun rise and set at Cairo, St Helena, Bombay, Port Jackson, Cape Horn, Quebec, Mexico, and Pekin, on the 22d June, 10th September, 22d December, and 1st May? At what times does the sun rise and set at Constantinople, Ispahan, Calcutta, Canton, Lima, Valparaiso, Sierra Leone, Madeira, Paris, London, Edinburgh, and Orkney, on the 1st and 15th of each month, from 1st June to 1st January?

PROB. X.—*To find the sun's amplitude or on what point of the compass the sun rises and sets, on a given day, at any particular place.*

RULE.—Rectify the globe for the latitude of the place and find the sun's place for the particular day; then observe what place in the circle of rhumbs, on the wooden horizon, is cut by the sun's place in the ecliptic when brought to the eastern edge of the horizon, and also when brought to the western,—and that will be the point required.

EX.—At what points of the compass does the sun rise and set at Gibraltar, on the 17th July, at Petersburg on the 10th October, and at Edinburgh on the 9th June?—Ans. Rises E. 26½° N., sets W. 26½° N.;—rises E. 12¼° S., sets W. 12¼° S.;—rises N. E., sets N. W.

At what points of the compass does the sun rise and set at Edinburgh, Archangel, Smyrna, Cairo, Cape Town, Calcutta, Pekin, Sydney, Monte Video, and Mecca, on the 1st and 15th of each month, from 1st June to 1st January?

* Thus, if the sun rise at 6, the length of the night is 12 hours; if he set at 9, the length of the day is 18 hours. Places on the equator have sunrise at 6, and sunset at 6; and, of course, day and night equal throughout the whole year. The length of the longest day increases with the latitude; and at the polar circles the longest day is 24 hours, and the longest night the same. From these circles to the poles, the days continue to lengthen into weeks and months: at the poles, the sun is visible for six months, and invisible during the other six.

Prob. XI.—*The day of the month being given, to find the sun's declination,* and the places to which he is vertical.*

Rule.—The sun's place in the ecliptic for the given day being brought to the meridian, the degree marked over it is the declination:—turn the globe, and all the places which pass under that degree will have the sun vertical on that day.

Ex.—What is the sun's declination, and to what places will he be vertical on the 7th May, the 10th February, the 4th June, and the 14th December? —Ans. Sun's declination $16\frac{3}{4}$° N.;—$14\frac{1}{2}$° S.;—$22\frac{1}{3}$° N.;—and $23\frac{1}{4}$° S.

What is the sun's declination, and to what places will he be vertical on the 1st and 15th of each month, from 1st December to 1st July?

Prob. XII.—*Given the place, day of the month, and hour, to find where the sun is then vertical.*

Rule.—Find the sun's declination; bring the given place to the meridian, and set the index to the given hour; turn the globe till the index points to xii. noon:—all the places then under the meridian have noon at the given hour; and the place whose latitude corresponds with the sun's declination has the sun vertical at the given hour.

Ex.—Where is the sun vertical on the 8th of April, when it is 6 in the morning at Dublin? Where is the sun vertical on the 19th September, when it is 4 o'clock in the morning at Amsterdam? Ans. Candy in Ceylon;—island of Ternate.

Where is the sun vertical on the 1st and 15th of each month, from 1st December to 1st July, when it is 2, 4, 6, 8, and 10 a.m., and 2, 4, 6, 8, and 10 p.m. at Edinburgh, London, Paris, Rome, Cairo, Calcutta, Pekin, Lima, Mexico, and Quebec?

Prob. XIII.—*The day, hour, and place being given, to find where the sun is then rising and setting, and where it is noon or midnight.*

Rule.—Rectify the globe for the latitude of the place to which the sun is vertical at the given hour, and bring that place to the meridian. In this position of the globe, the sun is rising to all those places on the western edge of the horizon, and setting to those on the eastern; to those under the upper half of the meridian it is noon or mid-day; to those under the lower half midnight.

Ex.—To what places is the sun rising, to what places is he setting, and where is it noon and midnight, when at Edinburgh it is 7 in the morning, on the 14th of March? Where is it noon on the 30th June, when at London it is 9 in the evening? Where is it midnight on the 6th February, when it is noon at St Petersburg?—Ans. Rising to the Madeira and Canary Isles and on the equator at $18\frac{1}{2}$° W. long; setting to Kamtchatka, the Solomon Archipelago, New Caledonia, New Zealand, and on the equator at $161\frac{1}{2}$° E. long.; noon at Tobolsk, Kashgar, Attock, and Kerguelen's Land; midnight at Lake Athabasca, Los Alamos, Isles of Revillagigedo, and Easter Island —At King George's Island, N.W. coast of America, and Lord Hood's Isl-

* The declination of the sun is its distance from the equator, north or south.

and, in the South Sea.—At Cook's Inlet, N.W. coast of America, Walker's Isles, and Otaheite.

To what places is the sun rising, to what places is he setting, and where is it noon and midnight, on the 21st June, 23d September, 21st December, and 20th March, when it is 6 and 10 A. M., and 6 and 10 P. M. at Edinburgh, Paris, London, Rome, Constantinople, Cairo, Bombay, Calcutta, Sydney, Pekin, Lima, Mexico, and Quebec?

PROB. XIV.—*Given the place and the day of the month, to find the beginning, end, and duration of twilight.*

RULE.—Rectify the globe for the latitude of the given place, bring the sun's place in the ecliptic on the given day to the brass meridian, set the hour circle to XII., and fix the quadrant of altitude on the brass meridian over the given latitude: turn the globe westward till the sun's place comes to the edge of the horizon—and the hours passed over on the hour circle will show the time of the sun's setting or the beginning of evening twilight: continue the motion of the globe till the sun's place comes to 18° on the quadrant of altitude below the horizon—then the time on the hour circle shows when twilight ends; and the difference between that and the hour of sunset is the duration of twilight. The beginning of morning twilight and the time of the sun's rising are found by turning the globe eastward.

Ex.—Find the beginning, end, and duration of twilight at Edinburgh, on the 20th of August.—Ans. Morning twilight begins 1h. 45′, ends 4h. 45′. Evening twilight begins 7h. 15′, ends 10h. 15′, duration 3h.

Find the beginning, etc., of twilight at Edinburgh, Paris, Dublin, London, and Birmingham, on the 1st and 15th of each month of the year.

PROB. XV.—*A place in the torrid zone being given, to find on what two days of the year the sun will be vertical there.*

RULE.—Find the latitude of the place, turn the globe, and observe the two points of the ecliptic that pass under the degree of latitude:—opposite to these points, on the wooden horizon, will be found the days required.

Ex.—On what days is the sun vertical at Madras, St Helena, Cape Comorin, Lima, Cape Verde?—Ans. April 25th and August 18th;—February 5th and November 6th;—April 11th and September 2d;—February 17th and October 25th;—April 30th and August 13th.

On what days is the sun vertical at Bogota, Cuzco, Mexico, Porto Bello, Port au Prince, Kingston in Jamaica, Paramaribo, Pernambuco, Bahia, Truxillo, Cape St Roque, Sierra Leone, Fernando Po, Timbuctoo, Sokoto, Coomassie, Mecca, Mocha, Candy, Seringapatam, Bankok, Batavia, Manilla, and Surinam?

PROB. XVI.—*Given the month and day at any given place (not in the frigid zones), to find what other day of the year is of the same length.*

RULE.—Bring the sun's place in the ecliptic for the given day to the brass meridian, and observe the degree above it; turn the globe till some other point of the ecliptic falls under

the same degree of the meridian; find this point of the ecliptic on the horizon, and directly against it is the day of the month required.

Ex.—What other days of the year are of the same length at Edinburgh, as April 30th and September 1st?—Ans. Aug. 12th and April 11th.

What other days of the year are of the same length at Vienna, as March 1st, May 1st, July 1st, August 1st, October 1st, January 1st?

PROB. XVII.—*To find the sun's meridian altitude at any given place, on a given day.*

RULE.—Rectify the globe for the latitude of the place, bring the sun's place for the given day to the meridian:—the number of degrees between that place and the horizon shows the altitude required.

Ex.—What are the meridian altitudes of the sun at London on the 11th January, at Constantiople on the 8th November, at Pekin on the 4th July? —Ans. 16½°;—32¼°;—and 73°.

What are the sun's meridian altitudes on the 1st and 15th of each month, from 1st June to 1st January, at Edinburgh, London, Dublin, Paris, Batavia, Sydney, Quebec, Sierra Leone, Mexico, Bankok, Mocha, Ispahan, Jerusalem, and the Mauritius?

PROB. XVIII.—*To find the altitude and azimuth of the sun at any given place and hour.*

RULE.—Rectify the globe for the latitude; bring the sun's place to the meridian, and set the index to XII. noon; turn the globe till the index points to the given hour, then fix the quadrant of altitude in the zenith, and lay it over the sun's place:—the degree on the quadrant, over the sun's place, will show the altitude; the number of degrees on the horizon, reckoned from the north or south pole to the graduated edge of the quadrant, shows the azimuth.

Ex.—What are the altitude and azimuth of the sun at Berlin on the 12th August, at 10 o'clock forenoon? at Cadiz on the 3d October, at 1 o'clock afternoon? at Hamburg on the 17th March, at 10 o'clock forenoon?—Ans. Alt. 45°, az. 43½°;—alt. 47°, az. 21¼°;—alt. 30°, az. 35¼°.

What are the altitude and azimuth of the sun on the 1st and 15th of each month, from 1st December to 1st July, when it is 9 and 10 A.M., and 1 and 2½ P.M., at Edinburgh, St Petersburg, Paris, Lisbon, Madrid, Vienna, Buda, Naples, Malta, Algiers, Cape Town, Sydney, Pekin, Quebec, New York, Arequipa, Monte Video, Santiago, and Jesso?

PROB. XIX.—*To find at what hours the sun is due east and due west on any day at a given place.*

RULE.—Rectify the globe for the latitude of the place, bring the sun's place in the ecliptic for the given day to the meridian, and set the index to XII.; fix the quadrant of altitude on the brass meridian over the latitude of the place, and bring the other end of it to the E. point of the horizon; keep the quadrant in this position, and turn the globe till the sun's place comes to the graduated edge of the quadrant;—the hours

passed over by the index show the time from noon when the sun is due east or west.*

Ex.—At what hours is the sun due east and due west at Edinburgh on the 1st of May? At what hours is the sun due east and due west at the Cape of Good Hope on the 1st of December?—Ans. Due east at 6h. 30′ A. M., and due west at 5h. 30′ P. M.; due east at 8h. 20′ A. M., and due west at 3h. 40′ P. M.

At what hours is the sun due east and due west at St Petersburg, Stockholm, London, Dublin, Glasgow, Paris, and Rome, on the 1st and 15th of April, May, June, July, and August?

PROB. XX.—*Given the latitude of the place, day of the month, and the sun's altitude, to find the sun's azimuth and the hour of the day.*

RULE.—Rectify the globe for the latitude of the place, fix the quadrant of altitude on the brass meridian over the given latitude, bring the sun's place in the ecliptic to the brass meridian, and set the hour circle to XII.; turn the globe till the sun's place in the ecliptic coincides with the given altitude on the quadrant:—the hours passed over on the hour circle will show the time from noon, and the azimuth will be found on the horizon as in Prob. XVIII.

Ex.—What are the hour of the day and the sun's azimuth at Edinburgh on the 1st of August, the altitude of the sun being 36°?—Ans. 8h. 40′ A. M., and 3h. 20′ P. M. Azimuth 69° 37′.

Find the hour of the day and the sun's azimuth at Edinburgh, Belfast, Liverpool, Berlin, Rome, and Geneva, on the 15th of each month of the year, when the sun's altitude is 20°, 30°, and 35°.

PROB. XXI.—*To find the latitude of a place from the sun's meridian altitude on a given day.*

RULE.—Bring the sun's place in the ecliptic for the given day to the upper part of the brass meridian; count the number of degrees of altitude from it, towards the north or south points of the horizon (according as the sun was north or south of the place of observation),† and mark at what degree it ends; then bring this degree to the north or south point of the horizon,—and the elevation of the contrary pole will show the latitude.

Ex.—On the 1st of May 1835, the sun's meridian altitudes were observed to be at different places, 22°, 32°, 40°, and 56°; the sun being north of the observer: What were the latitudes of the places of observation?—Ans. 53°;—43°;—35°;—and 19° S.

On the 1st of August, the sun's meridian altitudes were observed at several places to be 15°, 25°, 32°, 49°, the sun being to the south of the observer; and 12°, 21°, 37°, 43°, and 71°, the sun being to the north of the observer: What are the latitudes of these places?

* If the latitude and the declination are both north or both south, the sun will be due east and due west when he is above the horizon; but if the one is north and the other south, then the sun is below the horizon.

† To limit the problem, it is necessary to mention whether the sun is to the north or south of the place of observation.

PROB. XXII.—*To find all the places to which an eclipse of the sun or of the moon will be visible at any instant.*

RULE.—Rectify the globe for the latitude of the place to which the sun is vertical at the given instant, and bring it to the meridian:—the eclipse, if of the sun, will be visible to all the places which are above the horizon; if of the moon, to all the places which are under the horizon.

EX.—One year there was a total eclipse of the moon at Greenwich on the 2d September at 11 o'clock evening; to what places was it then visible? There was an eclipse of the moon on the 2nd February at Greenwich, partly visible at about 5 o'clock in the evening; to what places was it then visible?—Ans. The line of visibility stretches from the Gulf of the 72 Islands at the mouth of the Yenesei, in Siberia, to Java Head, cutting the equator in 105° E. longitude, and on the W. from Discovery Island, in Davis Strait, to Lima in Peru, cutting the equator in 75° W. longitude.—The line of visibility stretches from Iceland to Bathurst, in the S. E. of Cape Colony, cutting the equator into 15° E. long.; from Iceland in a direct line, to Cape Fairweather, on the N. W. coast of America, and thence to the islands of New Zealand, cutting the equator in 166° W. long. The moon was eclipsed at Greenwich on the 6th January at 8 o'clock A. M.; to what places was the eclipse then visible? The moon was eclipsed at Greenwich, on the 1st July, at midnight; to what places was the eclipse then visible? The sun was eclipsed at Greenwich, July 17th, at 6 o'clock A. M.; to what places was it then visible? The moon was eclipsed at Greenwich, December 26th, at 9h. 30′ P. M.; to what places was it then visible? The moon was eclipsed at Paris, December 16th, at 5 o'clock A. M.; to what places was it then visible?

PROB. XXIII.—*Any place in the north frigid zone being given, to find how long the sun shines there without setting, and how long he is totally absent.*

RULE.—Subtract the latitude of the place from 90°; the remainder is the sun's declination N. when the longest day begins and ends, or his declination S. when the longest night begins and ends. Observe what degree in the ecliptic on each side of 30° ♊, and on each side of 30° ♐, agrees with the declinations, and find the days corresponding to them on the horizon. The days answering to the sun's place west of 30° ♊, and west of 30° ♐, will be, the former the commencement of the longest day, and the latter that of the longest night; and the days agreeing with the sun's place east of 30° ♊, and east of 30° ♐, will give, the former the end of the longest day, and the latter the end of the longest night.

EX.—What is the length of the longest day and night at the North Cape in Lapland and the northern point of Novai Zemlia? Captain Parry wintered on Melville Island, in 75° N. lat.: how long was he involved in darkness?—Ans. The longest day begins May 15th, ends July 29th; the longest night begins November 17th, ends January 26th; the longest day begins April 25th, ends August 19th; the longest night begins October 28th, ends February 14th;—from November 3d to February 8th.

What are the lengths of the longest day and longest night at Fury and Hecla Strait, Fair Foreland in Spitzbergen, Cape Munster in Nova Zembla, North-east Cape in Siberia, Icy Cape, Croker Bay, Port Bowen, Discovery Island?

PROB. XXIV.—*To find the antœci* of a place.*

RULE.—Find the latitude of the place given;—at the corresponding latitude on the opposite side of the equator of the same meridian are the antœci.

Ex.—Who are the antœci of the inhabitants of Barca,—of Quebec,—of Oporto?—Ans. The people of Cape Colony;—the Patagonians;—The inhabitants of Gough's Isle.

Who are the antœci of St Helena, Cape Desolation, Greenland, Fortune Land, Valdivia, Ripen in Denmark, Alexandria, Niphon, Tasmania?

PROB. XXV.—*To find the periœci† of a place.*

RULE.—Bring the given place to the meridian, and observe the degree above it; set the index to XII. noon, and turn the globe till the index points to XII. midnight:—under the same degree of the meridian on the same side of the equator as the given place, are the periœci of that place.

Ex.—Who are the periœci of the people of St Petersburg, Cashmere, Mooltan, Mexico?—Ans. The inhabitants of Montagu Island;—Paso del Norte in Mexico;—Arispè in Mexico;—Kimedy in India, nearly.

Who are the periœci of Amsterdam, Quito, St John's in Newfoundland, St Domingo, Barbadoes, Palawan, London?

PROB. XXVI.—*To find the antipodes‡ of a place.*

RULE.—Bring the given place to the meridian, and observe its latitude; set the index to XII. noon, and turn the globe till the index points to XII. midnight:—under the same degree of latitude as the place given, but on the opposite side of the equator, will be found the antipodes.

Ex.—Who are the antipodes of the inhabitants of Bantam, Botany Bay island of Borneo, Cape Horn?—Ans. The people of Tunja in New Granada—the Azores, nearly;—Brazil and Ecuador;—Kirensk in Siberia, nearly.

Who are the antipodes of Guiana, Cambodia, Santa Fè in La Plata Corea, island of Hainan, island of Kiusiu?

* The antœci are those who live under the same meridian, and have the same latitude, but on opposite sides of the equator; they have noon at the same time, but their summer and winter at opposite periods of the year.

† The periœci live under the same degree of latitude, but differ 180° in longitude; consequently, they have their summer and winter at the same times, but their day and night at opposite times.

‡ Antipodes have the same latitude on opposite sides of the equator, and differ 180° in longitude; consequently, they have their day and night, their summer and winter, at opposite times.

THE CELESTIAL GLOBE.

THE Celestial Globe is a representation of the heavens, on which are traced the circles necessary for finding the position of the stars. It is suspended in a brass meridian supported on a wooden horizon, in the same manner as the Terrestrial Globe.

The two points in which the equinoctial intersects the ecliptic are called the Equinoctial Points. The first point of Aries, or that at which the sun appears to cross the equinoctial towards the north, is the vernal equinoctial point; the first point of Libra, at which the sun appears to recross the equinoctial towards the south, is the autumnal equinoctial point. When the sun is in either of these two points, the day and night are equal on every part of the earth.*

The first point of Cancer and the first point of Capricorn are called the Solstitial Points. When the sun is in the first point of Cancer, it is the summer solstice, and we have our longest day; when he is in the first point of Capricorn, it is the winter solstice, and we have our shortest day.†

The right ascension of a star is the distance, measured eastward upon the equinoctial, from the first point of Aries to the point where a great circle drawn through the star, and perpendicular to the equinoctial, intersects it.

The latitude of a star is the distance between the star and the ecliptic, measured upon a great circle drawn through the star, and perpendicular to the ecliptic; the longitude is the distance between the first point of Aries and the point where the circle cuts the ecliptic. Longitude, latitude, and declination,‡ are expressed in degrees, minutes, etc., and right ascension in hours, minutes, etc. The sun has no latitude, as he is always in the ecliptic.

The signs and degrees are usually marked on one side of the ecliptic, and the days of the month on the other.

A Constellation is an assemblage of stars distinguished by the name of some animal or object to which the outline of the whole is supposed to bear a resemblance,—as the Bear, the Dragon, Orion, Boötes, the Crown, etc.

The Zodiac is an imaginary belt around the heavens, about 16 degrees broad, in which all the larger planets move. Through the middle of this belt runs the ecliptic, or the apparent path of the sun.

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* The vernal equinox happens on the 20th or 21st of March; the autumnal equinox on the 23d of September.

† The summer solstice happens on the 21st or 22d of June; the winter solstice on the 21st or 22d of December.

‡ The declination of a star is its distance north or south of the equinoctial.

PROBLEMS TO BE SOLVED BY THE CELESTIAL GLOBE.

PROB. I.—*To find the latitude and longitude of a star.*

RULE.—Bring the pole of the ecliptic to the zenith, in which fix the quadrant, and lay it over the given star:—the number of degrees between the ecliptic and the star shows the latitude; the number of degrees between the edge of the quadrant and the first point of Aries indicates the longitude.

Ex.—What are the latitude and longitude of Procyon in Canis Minor, of Sirius in Canis Major, and of Arcturus in Boötes?—Ans. Lat. 16° S., and long. 114°;—Lat. 40° S., and long. 101°;—Lat. 30½° N., and long. 201°.

What are the latitude and longitude of Aldebaran, Bellatrix, Deneb, Dubhe, Alphecca, Altair, Markab, Fomalhaut, Antares, Canopus, Rigel, Ras Alhagus, and Achernar?

PROB. II.—*To find a star's place in the heavens, its latitude and longitude being given.*

RULE.—Set the globe and quadrant as in the last problem; then lay the graduated edge of the quadrant on the given longitude in the ecliptic,—and the star will be found under the given latitude.

Ex.—What star is that whose longitude is 85°, and whose latitude is 16° S.? What star is that whose longitude is 297°, and whose latitude is 30° N.?—Ans. Betelgeux in Orion;—and Altair in Aquila.

What are the stars whose latitudes and longitudes are 23° N. and long. 54°; 22½° N. and long. 79°; 60° N. and long. 334°; 28° N. and long. 40°; 36° N. and long. 260°; 4° S. and long. 247°; 17° S. and long. 28½°; 2° S. and long. 201°; 60° S. and long. 341°?

PROB. III.—*To find the declination of the sun or a star.*

RULE.—Bring the sun's place, or the star, to the meridian; observe its distance N. or S. from the equinoctial,—and the distance will be the declination.

Ex.—What is the declination of the sun on the 11th April? What is the declination of Castor in Gemini, and of Regulus in Leo?—Ans. Declination 8¼° N.;—32¼° N.;—and 13° N.

What is the declination of the sun on the 1st and 15th of each month, from July 1st to January 1st? What is the declination of each of the stars mentioned in PROB. I.?

PROB. IV.—*To find the right ascension of the sun, or any star.*

RULE.—Bring the sun's place, or the star, to the meridian;—the degree of the equinoctial, cut by the meridian, shows the right ascension.

Ex.—What is the sun's right ascension on the 5th July and the 13th October? What is the right ascension of α Lyræ, of Aldebaran in Taurus, and of Rigel in Orion's Foot?—Ans. Right ascension 6h. 56′;—13h. 12′;—18h. 31′;—4h. 26′;—5h. 6′.

What is the right ascension of the sun on the 1st, 10th, and 20th of each month of the year? What is the right ascension of each of the stars mentioned in PROB. I.?

PROB. V.—*The right ascension and declination of any of the heavenly bodies being given, to find its place on the globe.*

RULE.—Bring the given degree of right ascension to the brass meridian,—and under the given degree of declination on the brass meridian is the place of the body.

EX.—What star has 13h. 42′ right ascension and 50° 3′ declination N.?—Ans. η Ursae Majoris.

What stars have 0h. 1′ R. A. and 28° 16′ dec. N.;—5h. 7′ R. A. and 8° 23′ dec. S.;—6h. 39′ R. A. and 16° 31′ dec. S.;—10h. 6′ R. A. and 12° 41′ dec. N.;—14h. 9′ R. A. and 19° 57′ dec. N.;—16h. 20′ R. A. and 26° 6′ dec. S?

PROB. VI.—*The latitude of a place, the day and hour being given, to represent the face of the heavens, so as to point out all the constellations and remarkable stars then visible.*

RULE.—Rectify the globe for the latitude of the place; bring the sun's place for the given day to the meridian; set the index to XII., then turn the globe till the index points to the given hour. In this position the globe will represent the face of the heavens.

EX.—Represent the face of the heavens as it will appear at London for 2 and 3 in the morning on the 18th January; for 8 and 11 evening on the 12th March.

Represent the face of the heavens for the 1st and 15th of each month of the year, and for each hour from 9 P.M. to 3 A.M., as it will appear at Edinburgh, Paris, Cape of Good Hope, Paramatta, and Calcutta.

PROB. VII.—*To find the time when any of the heavenly bodies rises, sets, or comes to the meridian, on a particular day, at a given place.*

RULE.—Rectify the globe for the latitude of the place; bring the sun's place to the meridian, and set the index to XII.; then turn the globe till the given star comes to the eastern edge of the horizon,—the index will show the time of rising; carry it to the western edge,—the index will show the time of setting; then bring it to the meridian,—and the index shows the time of its culmination or southing.*

EX.—At what time does Regulus, in Leo, rise, set, and culminate at Edinburgh, on the 4th of February? At what time does Alphecca, in Corona Borealis, rise, set, and culminate at Madrid, on the 7th of May?—Ans. Rises 5h. 25′ A., souths 0h. 45′ M., and sets 8h. 5′ M.;—rises 4h. 50′ A., souths 0h. 35′ M., and sets 8h. 20′ M.

At what time does each of the stars mentioned in PROB. I. rise, culminate, and set, on the 1st and 15th of each month of the year, at the places mentioned in the last Problem?

* In turning round the globe it will be observed that some of the stars do not descend below the horizon, while others in the opposite point of the heavens continue always below it. The former never set at the given place for which the globe is rectified, and are called *circumpolar stars;* the latter never rise at the given place.

PROB. VIII.—*To find on what day of the year a star comes to the meridian at a given hour.*

RULE.—Bring the star to the brass meridian, and set the index to the given hour; turn the globe till the index points to XII. noon,—and the day of the month which corresponds to the degree of the ecliptic cut by the meridian is the day required.

Ex.—On what day does Rigel, in Orion, come to the meridian at 8 o'clock in the evening? On what day does Sirius come to the meridian at 10 o'clock evening?—Ans. February 3d;—January 28th.

On what day does Aldebaran come to the meridian at 7, 8, 10, 12 P.M. and 2, 4, 6 A.M.?—On what days do each of the stars mentioned in PROB. I. come to the meridian at 7, 9, 11 P.M. and 1, 3, 5 A.M.?

PROB. IX.—*To find the amplitude of any star, its oblique ascension and descension, and its diurnal arc, at any given place.*

RULE.—Rectify the globe for the latitude of the place, and bring the given star to the eastern part of the horizon;—the number of degrees between the eastern point of the horizon and the star will be its rising amplitude, and the degree of the equinoctial cut by the horizon will be the oblique ascension: set the hour circle to XII., and turn the globe westward till the given star comes to the western edge of the horizon,—the hours passed over on the hour circle will be the star's diurnal arc, or the time of its continuance above the horizon. The setting amplitude is the number of degrees between the western point of the horizon and the star, and the oblique descension is that degree of the equinoctial intercepted by the horizon, reckoning from the first point of Aries.

Ex.—Required the amplitude, the oblique ascension and descension, and the diurnal arc of Rigel, at Edinburgh?—Ans. 15° E., amplitude at rising; 15° W. at setting; oblique ascension 88½°, descension 64°, and its diurnal arc 10h. 20′.

Required the amplitude, the oblique ascension and descension, and the diurnal arc of Aldebaran, Capella, Rigel, Sirius, Regulus, Arcturus, and Vega, at London, Paris, Vienna, Constantinople, and Moscow.

PROB. X.—*To find the altitude and azimuth of the sun or a star at any given place and time.*

RULE.—Rectify the globe for the latitude of the place; bring the sun's place in the ecliptic and XII. on the hour circle to the brass meridian; and fix the quadrant in the zenith; then turn the globe till the given hour comes to the meridian, and lay the graduated edge of the quadrant on the star;—the degree of the quadrant over the star will show its altitude, and the number of degrees counted upon the horizon, from its intersection by the quadrant to the north or south point, will be its azimuth.

Ex.—At Edinburgh, on the 4th August, at 10h. P. M., what are the altitude and azimuth of Mirach, Almaach, and Altair?—Ans. Alt. 29°, az.

69° from N. towards E.;—alt. 28½°, az. 56½° from N. towards E.;—alt. 42°, az. 12⅞° from S. towards E.

At Edinburgh, on the 31st December, at 9h. and 11h. P.M., what are the altitude and azimuth of Capella, Dubhe, Regulus, Alioth, Castor, Procyon, Bellatrix, Sirius, Menkar, Algenib, Mirach, Algol, Shedir, Alderamin, Arided, and α Lyræ?

At London, on the 1st March, at midnight, what are the altitude and azimuth of Kochab, Arided, α Lyræ, Albireo, Alphecca, Ras Alhagus, Yed, Arcturus, Benetnach, Spica Virginis, Regulus, Cor Hydræ, Sirius, Castor, Pollux, Betelgeux, Procyon, Capella, Aldebaran, the Pleiades, Algol, Almaach, Shedir?

PROB. XI.—*To find what stars are rising, setting, or culminating at any given time and place.*

RULE.—Rectify the globe for the latitude of the place; bring the sun's place in the ecliptic to the brass meridian, and set the hour circle to XII.; then turn the globe eastward or westward, according as the time is before or after noon, till the given hour comes to the meridian:—then all the stars on the eastern edge of the horizon will be rising; those under the brass meridian culminating; and those on the western edge of the horizon setting; all above the horizon will be visible, all under it invisible.

EX.—At Edinburgh, on the 5th August, at 11 o'clock A., what stars are rising, what culminating, and what setting?—Ans. Rising, Piscis Australis, ι 2, η Ceti, ι Tauri, κ Aurigæ. Culminating, ι Ursae Majoris, 15 and 17 Anseris et Vulpeculæ; ϑ Antinoi. Setting, Vindemiatrix Virginis, Zuben ha Krabi, η, ϑ, and β Librae; α, γ 1, γ 2, ξ, Sagittarii.

What stars, are rising, culminating, and setting at Edinburgh, Rome, Cairo, Cape of Good Hope, Sydney, Bombay, and Calcutta, on the 20th of each of the months of the year, at 10h. A. and 2h. M.

PROB. XII.—*To find the distance of one star from another in degrees.*

RULE.—Lay the quadrant of altitude over the two stars, the division marked 0° being placed on one of them;—then the degree which falls upon the other shows the number of degrees between them, or their apparent angular distance as seen from the earth.

EX.—Required the distance of Rigel from Antares, Vega, and Spica Virginis.—Ans. 157°; 145½°; and 119°.

Required the distance of Canopus from Algenib, Polaris, Aldebaran, Rigel, and Procyon, and also their distances from each other.

PROB. XIII.—*The latitude of a place, the altitude of a star, and the day of the month being given, to find the hour of the night.*

RULE.—Rectify the globe for the latitude; bring the sun's place to the meridian, and set the index to XII.; fix the quadrant in the zenith; then move the globe and quadrant till the star comes under the quadrant at the given altitude—and the index will show the hour required.

Ex.—At Edinburgh, on the 13th December, when the altitude of Aldebaran is 46°, what is the hour of the night? When, at the same place, the altitude of Capella, in Auriga, is 70° on the 20th of January, what are the hours of the night?—Ans. 9h. 15′ P. M., and 0h. 45′ A. M.;—7h. and 10h. 35′ P. M.

At Edinburgh, on the 1st and 15th of June, when the altitude of Alphecca is 50°, α Lyræ 41°, Alderamin 45°, and Arided 45°, what are the hours of the night? At Paris, on the 1st of October and 15th of November, when the altitude of Markab is 45°, Altair 49°, Almaach 45°, the Pleiades 27°, and Aldebaran 22°, what are the hours of the night? At Calcutta, on the 1st January and 1st February, when the altitude of Menkar is 66½°, Rigel 45°, Betelgeux 60°, Procyon 48°, and Sirius 50°, what are the hours of the night?

PROB. XIV.—*The year and day being given, to find the place of a planet.*

RULE.—Find the sun's place for the given day, and bring it to the brass meridian; set the index to XII.; then find in the Nautical Almanac, or in the New Edinburgh Almanac, the time when the planet passes the meridian on the given day, and turn the globe till the index points to the hour thus found, find in the Almanac the declination of the planet for the same day,—and under the degrees of declination on the brass meridian is the place of the planet.

Ex.—What were the places of Venus and Jupiter on the 1st of August 1850?—Ans. Venus was in the constellation Libra, her R. A. being 11h. 12½′, and her declination 6° 13′ N.; Jupiter was in the constellation Libra, his R. A. being 11h. 32′, and his declination 4° 16½′ N.

What were the places of Venus on the 19th December 1850, 1851, and 1852? What were the places of the moon on the 25th March 1850, 1851, and 1852? Find the places of the moon and of each of the planets for the 1st and 25th of each month of the years 1863, 1866, 1868, and 1870.

TABLE,

SHOWING THE LENGTH OF A DEGREE OF LONGITUDE ON ANY PARALLEL OF LATITUDE, BETWEEN THE EQUATOR AND THE POLES, THE EARTH BEING SUPPOSED A SPHERE.

Deg. of Lat.	Geog. Miles.	Eng. Miles.	Deg. of Lat.	Geog. Miles.	Eng. Miles.	Deg. of Lat.	Geog. Miles.	Eng. Miles.
1	59.99	69.10	31	51.43	59.24	61	29.09	33.51
2	59.96	69.07	32	50.88	58.61	62	28.17	32.45
3	59.92	69.02	33	50.32	57.97	63	27.24	31.38
4	59.85	68.94	34	49.74	57.30	64	26.30	30.29
5	59.77	68.85	35	49.15	56.62	65	25.36	29.21
6	59.67	68.74	36	48.54	55.91	66	24.40	28.11
7	59.55	68.60	37	47.92	55.20	67	23.44	27.00
8	59.42	68.45	38	47.28	54.46	68	22.48	25.89
9	59.26	68.26	39	46.63	53.72	69	21.50	24.76
10	59.09	68.06	40	45.96	52.94	70	20.52	23.64
11	58.89	67.84	41	45.28	52.16	71	19.53	22.50
12	58.68	67.60	42	44.59	51.36	72	18.54	21.35
13	58.46	67.34	43	43.88	50.55	73	17.54	20.20
14	58.22	67.07	44	43.16	49.72	74	16.54	19.05
15	57.95	66.76	45	42.43	48.88	75	15.53	17.89
16	57.67	66.43	46	41.68	48.01	76	14.52	16.72
17	57.38	66.10	47	40.92	47.14	77	13.50	15.55
18	57.06	65.73	48	40.15	46.25	78	12.47	14.36
19	56.73	65.35	49	39.36	45.34	79	11.45	13.19
20	56.38	64.95	50	38.57	44.43	80	10.42	12.00
21	56.01	64.52	51	37.76	43.50	81	9.39	10.81
22	55.63	64.08	52	36.94	42.55	82	8.35	9.62
23	55.23	63.62	53	36.11	41.60	83	7.31	8.42
24	54.81	63.14	54	35.27	40.63	84	6.27	7.22
25	54.38	62.64	55	34.41	39.64	85	5.23	6.02
26	53.93	62.12	56	33.55	38.65	86	4.19	4.82
27	53.46	61.58	57	32.68	37.64	87	3.14	3.61
28	52.97	61.02	58	31.80	36.63	88	2.09	2.40
29	52.47	60.44	59	30.90	35.59	89	1.05	1.21
30	51.96	59.85	60	30.00	34.56	90	0.00	0.00

MATHEMATICAL GEOGRAPHY

ASTRONOMY.

ASTRONOMY is the science of the heavenly bodies—that is, the Sun, Moon, Earth, and Stars. It treats of their forms, magnitudes, distances, relative situations, real and apparent motions, and actions on each other.

MATHEMATICAL GEOGRAPHY treats of the form and magnitude of the Earth, of the lines supposed to be drawn on its surface to define the positions of places, and of the relative positions of its different parts in respect to the heavenly bodies, especially the SUN.

CHAPTER I.

THE SPHERE OF THE HEAVENS.

THE surface of the sky or heavens appears to us as a concave or hollow sphere; and it is convenient to regard it as such, and to imagine various lines drawn upon it, for the sake of defining with precision the positions of objects.

The whole heavens appear to be in continual motion from east to west, carrying the sun, moon, and stars along with them, and completing one revolution in about 24 hours—or, more correctly, in 23 hours, 56 minutes, 4·09 seconds.

But this is only an apparent motion—caused by the rotation of the earth on its axis from west to east in the same time.

We know that we may be in motion without perceiving it, as in the cabin of a ship, or of a canal boat moving gently, we may be carried a long way without knowing that we have moved at all. We do not perceive motion when it is uniform, and when the bodies around us are moving at the same rate, so that we retain the same relative position to them. We know also that our motion may cause other bodies to appear to move which are really standing still, as when in a railway carriage we see the trees, hedges, and banks appear to flit rapidly past us, in a direction opposite to that in which we are moving. The apparent revolution of the whole heavens round the earth may thus be explained by the earth's rotation on its axis.

When the stars are observed, they all seem to move together from the east side of the horizon towards the west. Some rise very far south, ascend but a little way above the horizon, and set far south on the west side of the horizon: some rise in the east, ascend very high in the sky, and after describing a large curve in the heavens, set in the west: others rise and set north of due east and west: others do not set at all, but describe complete circles above the horizon round one point: others describe smaller and smaller circles round that point; and the stars very near that point appear, to judge by the naked eye, *not to move at all.*

That point is the North Pole of the Heavens. There is a similar point opposite to it in the southern regions of the sky. These two points are the extremities of the imaginary line or axis, about which the heavens appear to turn or rotate daily. They are vertical at the poles of the earth, and in the horizon at its equator. And at any place on the earth's surface, the pole of the heavens, visible there, always appears in the same position in relation to fixed objects at that place, while every other point in the sky is continually changing its position in relation to them.

The poles of the heavens may also be defined as the points where the earth's axis produced would meet the sky.

There is a pretty bright star very near the north pole of the heavens, called the North Polar Star, which may be easily found out.

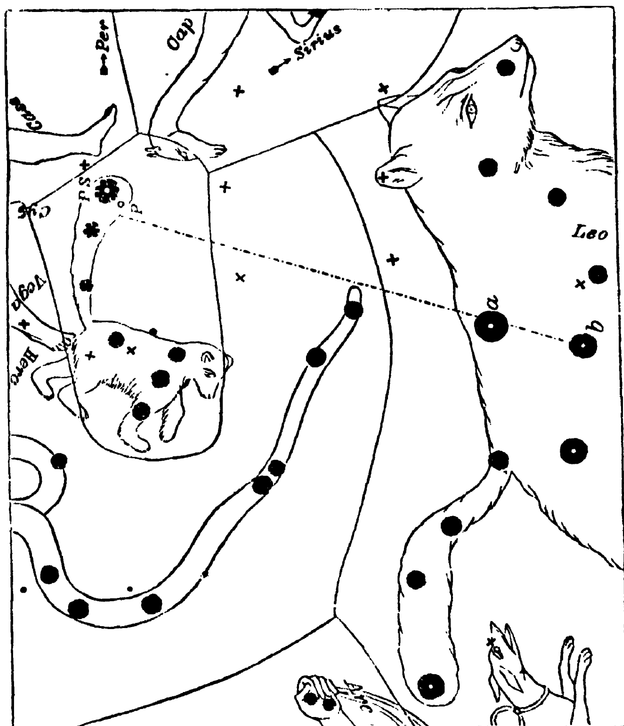
The ancients had the starry heavens mapped out into constellations, each consisting of a collection of neighbouring stars, separated from the others by an imaginary line, and bearing a name, expressive of some figure which the leading stars in the constellation were supposed to resemble.

The stars in each constellation are named by the letters of the Greek alphabet,—the brightest being termed α (alpha);

the next brightest β (beta), and so on. When there are more stars in a constellation than there are Greek letters, the others are denoted by numbers. The leading stars in each constellation have usually some name applied to each, as Dubhe, Capella, Vega, Arcturus, Aldebaran.

At the left side of Diagram 3 below, may be observed a cluster of stars disposed within the figure of a small bear, and

Diagram 3.



separated by a line from the adjoining stars. The stars within that line form a constellation, termed Ursa Minor, or the Little Bear. In the same diagram are seen parts of other constellations—the Great Bear (Ursa Major); the Dragon (Draco), the hand of Boötes, and the feet of Cepheus.

The north pole-star is the brightest star in the constella-

tion of the Little Bear, at the tip of its tail. It is marked P S in the diagram. It is easily found out by means of the well-known seven bright stars commonly called *the Bear*, *the Plough*, *Charles's Wain*. These stars are represented in diagram 3, towards the lower part of the right side. If, when these stars are in any position, a line be imagined through the two (*b* and *a*) farthest from the tail, and be produced in a direction from the limbs of the animal, that line will pass close to the north polar star. These two stars are hence called "the Pointers."

These seven stars do not set in Great Britain. They are seen at one time between the pole-star and the horizon; at other times, higher in the sky, east or west of the pole-star; at other times, over head, nearly in the zenith.

If the direction of north be known, the pole-star may easily be found. Looking north, in Britain, it will be seen a little higher than halfway between the horizon and the zenith. The height of the pole above the horizon is always the same number of degrees, etc., as the latitude of the place.

By imaginary lines drawn with reference to the poles, the heavens are mapped out in the same way as the surface of the earth. Let Diag. 2, page 12, now be taken to represent a hemisphere of the heavens, the earth being shown by the black circle in the middle. N is the north pole of the heavens; S the south pole: the poles of the earth are where the line N S meets the black central circle.

A circle round the heavens equidistant from both poles is called the EQUINOCTIAL. One half of this circle is represented by the line E Q in the figure. It is called "equinoctial," from the Latin, *æquus*, equal, *nox*, night, because when the sun crosses this line in his apparent annual course round the heavens—which he does on March 20 and September 22—there is equal day and night all over the world. The equinoctial is the line which the plane of the earth's equator would make round the sky, if we imagine that plane produced so as to cut the sky.

Small circles round the heavens parallel to the equinoctial are called PARALLELS OF DECLINATION. See in Diag. 2, page 12, *z h*, *k o*, north of the equinoctial, *q* 15, *a b*, *m n*, etc., south of it.

Great circles passing through both poles of the heavens, as all the lines from N to S in Diag. 2, are called HOUR CIRCLES, and sometimes CELESTIAL MERIDIANS.

Observations of the sun have shown that he appears to move round a great circle of the heavens in a year. This great circle is called the ECLIPTIC. It is represented by the line *a o* in Diag. 2.

The plane of the ecliptic makes an angle of 23½° with the plane of the equinoctial; so that the farthest north point of

the ecliptic is only 66½°, while the farthest south point is 113½° from the north pole of the heavens.

The sun is in the north or highest point of the ecliptic on June 21, and is then vertical at the tropic of Cancer. He is in the south or lowest point on December 21, and is then vertical at the tropic of Capricorn. When he crosses the equinoctial he is vertical at the equator.

The north part of the ecliptic, where the sun is in June, is in that part of the heavens a little south of a bright star called CAPELLA, which lies to the west of the Great Bear, but at a greater distance from the north pole.

The distance of a heavenly body north or south from the equinoctial is called its DECLINATION, north or south, and is usually marked D. N. or D. S. Thus, we say that the sun's declination north on the 21st of June is 23½°, or that he is in D. N. 23½°. Declination in the heavens corresponds to latitude on the earth.

The distance of a heavenly body east from an hour circle called the first hour circle, is termed its RIGHT ASCENSION. This resembles longitude on the earth, but is not reckoned east and west, being counted east all the way round from 0° to 360°. The first hour circle is that which passes through the point where the sun crosses the equinoctial in spring (March 20), called *the first point of Aries*, or the spring equinox.

In Diag. 2, page 12, if E Q be the equinoctial, and *a o* the ecliptic, the point where they cross, in the centre of the figure, is the equinox or first point of Aries; and the hour circle passing through that point, represented by the straight line from N to S, is the first hour circle. The degrees of right ascension are seen marked in degrees and hours alternately *above* the line representing the equinoctial, at every 15 degrees.

As there are 360 degrees, and one revolution of the sphere is completed in 24 hours, each point in the heavens must move 15 degrees *west* in one hour. Hence the hour circles are sometimes named by *hours* instead of degrees. The same relation prevails as to time and degrees of longitude on earth—each point moves 15 degrees *east* in one hour.

The ecliptic is divided into 12 equal parts, of 30° each, called SIGNS, numbered from the first point of ARIES, which is the first of these signs. A belt of the heavens, extending a few degrees on each side of the ecliptic, is called the ZODIAC (from the Greek, *zodion*, the figure of an animal), from the constellations there being mostly figures of animals. Hence, these signs are often called SIGNS OF THE ZODIAC. The following table exhibits the signs of the zodiac, with the time of the sun entering into each, the characters used for each, and one or two other particulars:—

	Sign	Symbol		Month	Day	
Ascending.	Aries, the Ram,	♈	Northern Signs.	March	*20.	Spring Equinox (day and night equal everywhere).
	Taurus, the Bull,	♉		April	20.	
	Gemini, the Twins,	♊		May	21.	
Descending.	Cancer, the Crab,	♋		June	21.	Summer Solstice (or mid-summer).
	Leo, the Lion,	♌		July	23.	
	Virgo, the Virgin,	♍		August	23.	
	Libra, the Balance,	♎	Southern Signs.	September	23.	Autumnal Equinox (day and night equal everywhere).
	Scorpio, the Scorpion,	♏		October		
	Sagittarius, the Archer,	♐		November		
Ascending.	Capricornus, the Goat,	♑		December		Winter Solstice (Summer in the Southern Hemisphere).
	Aquarius, the Waterman,	♒		January		
	Pisces, the Fishes,	♓		February		

* These dates vary a little in different years.

As the sun enters the sign Cancer on the 21st of June, the tropic at which he is then vertical is called the tropic of Cancer, and as he then retraces his course, that parallel (either on the earth or the heavens) is called a Tropic, from the Greek, *trepo*, I turn. The tropic of Capricorn receives its name in the same way.

As the sun appears to pause or stand still a day or two before turning, the time is termed Solstice (from the Latin, *sol*, the sun, *sto*, I stand)—December 22, the winter solstice; June 21, the summer solstice.

The signs of the zodiac, in which the sun appears when he is north of the equinoctial, are called the *northern signs;* those in

which he is when south of the equinoctial, the *southern signs;* those in which he is when passing in a northerly direction are called *ascending;* those in which he is when going south, *descending.*

On the first hour circle, 23½° from the north pole, 90° from every part of the ecliptic, there is a remarkable point called the POLE OF THE ECLIPTIC. This point is in the constellation DRACO, a little farther from the north pole than the ankle of Cepheus in Diag. 3.

The north pole of the heavens moves so as to describe a circle round the pole of the ecliptic in 25,898 years. The movement thus made is too slight to be apparent in a lifetime; but in the course of ages the north pole will be far removed from the present pole-star, and will return to it again at the end of the above-mentioned period.

From this motion, which will be explained afterwards, the equinoctial points move backwards upon the ecliptic; and the signs of the zodiac, which were originally named from constellations in these signs, do not now correspond with these constellations; the sign Aries—meaning the first 30° from the spring or vernal equinox—is in the constellation Pisces; the sign Taurus in the constellation Aries, and so on.

The pupil should now endeavour to make himself acquainted with the positions and appearances of the following stars and constellations:—

The brightest star in the Great Bear, one of the pointers, marked *a* in Diag. 3, and termed DUBHE, is in R. A. 10h. 53m., or about 163°; D. N. 62° 37′.

A line drawn from about the middle of the tail of the Great Bear through the pole-star, and produced nearly as far on the other side of that star, will terminate in the constellation CASSIOPEIA, or the Lady in her Chair. The prominent stars in this constellation are five in number, and are arranged so as to make a figure somewhat like the letter W, but straggling, and with one angle of the W shorter than the other. Cassiopeia is one of the constellations in the Milky Way. The first hour circle passes through *Beta* of Cassiopeia, and close to *Delta* of the Great Bear, where the tail joins the body.

A straight line from the pole-star, perpendicular to the line joining the pointers and the pole-star, and on the same side of that line as the head of the Bear, passes close to a very bright star, CAPELLA; about twice as far from the pointers as the pole-star. This star is in R. A. 5h. 4m., or about 76°; D. N. 45° 49′. This is the brightest and most northern of the stars in the constellation AURIGA, or the Charioteer. The principal stars in this constellation, along with one of Taurus, form an elongated five-sided figure, stretching from north to south, and very well marked.

A straight line from the pole-star, in the direction nearly opposite to the line passing by Capella, leads to another very

bright star, VEGA, the principal star in the constellation Lyra. Vega is in R. A. 18h. 31m., or about 277°; D. N. 38° 38′. Capella and Vega are almost always visible in Great Britain. In about 12,000 years, the north pole will have moved half of its course round the pole of the ecliptic, and Vega, the brightest star near the point it will then occupy, will serve for a pole-star.

A straight line from the pole-star, passing near the star in the tip of the tail of the Great Bear, and twice the distance of the tail from the pole-star, leads to ARCTURUS, a very bright star, of a distinct reddish colour, the principal star in the constellation BOÖTES, or the Huntsman. Arcturus is in R. A. 14h. 8m., or about 212°; and D. N. 20° 1′.

On the first hour circle south of Cassiopeia, in D. N. 28° 12′, is ALPHORAT, the principal star in the constellation ANDROMEDA. Alphorat, along with three pretty bright stars of the constellation PEGASUS, forms a prominent square in the heavens.

ALDEBARAN, the brightest star in Taurus, is in R. A. 4h. 26m., about 66°; and D. N. 16° 10′. It has a marked ruddy colour. The PLEIADES, or seven stars of Taurus, a cluster by themselves, are in R. A. about 54°; D. N. 23° 30′. CASTOR and POLLUX, the brightest stars in GEMINI, are very near each other—in R. A. about 7½h.; D. N. 28° (Pollux), 32° (Castor).

REGULUS, the brightest star in LEO, is in R. A. 9h. 59m., about 150°; D. N. 12° 45′. The leading stars in this constellation form a figure like a sickle, of which Regulus is in the handle. This great constellation is nearly due south of the Great Bear. SPICA, the brightest star in VIRGO, is in R. A. 13h. 16m., or about 199°; D. S. 10° 19′.

The southern constellations of interest which are frequently visible in Great Britain are, ORION, CANIS MINOR, and CANIS MAJOR. They lie due south of CAPELLA and GEMINI, and are very prominent in the heavens during our winter. Orion forms a large striking four-sided figure, considerably elongated from north to south. In the middle are three stars, lying in a south-east and north-west direction, usually called ORION'S BELT. BETELGEUX, the brightest star, is in the north-east angle and is of a ruddy colour. SIRIUS, in the constellation CANIS MAJOR, the Greater Dog, and the brightest of the fixed stars, is south-east from Orion, R. A. about 100°; D. S. 16° 30′. The Pleiades, Aldebaran, Orion's Belt, and Sirius, are nearly in one straight line. PROCYON (R. A. 112°; D. N. 5° 37′), a very bright star, in the constellation CANIS MINOR, or the Lesser Dog, is nearly due south from the Twins (Gemini), and due east from Betelgeux.

The MILKY WAY, a whitish belt passing round the heavens, runs between Procyon and Sirius, then north-west between Gemini and Orion, then through Auriga, south-west of Capella; it then passes through several minor constellations, and Cas-

siopeia, and south-west, splitting into two divisions, south of the constellation CYGNUS or the Swan, not far from Vega.

With respect to the extent of the heavens visible at any place, the celestial sphere may be divided into three portions:—1. That part which never sets at the place (*i. e.* never sinks below the horizon), and the stars in which are always visible on clear nights. 2. That part which is only occasionally visible, being sometimes above, sometimes below the horizon of the place. 3. That part which is always below the horizon of the place, and therefore can never be seen from that place.

The CELESTIAL MERIDIAN of any place on earth means the HOUR CIRCLE which passes through the zenith of the place. The distance from the zenith to the horizon along that circle will be 90°.

At any place, the height of the pole of the heavens above the horizon (called *the elevation of the pole*) is always exactly equal to the latitude of the place. In other words, if we measure the number of degrees, etc., along the celestial meridian of a place from the horizon to the pole, we find that there are exactly as many as there are in the latitude of the place. The N. latitude of London is 51° 32′ +, and there the north pole (or north polar star which is close to the pole) is 51° 32′ + above the horizon. At Edinburgh, the elevation of the pole is 55° 57′ +, for that city is in N. lat. 55° 57′ +.

The distance in degrees, etc., of the zenith of a place from the equinoctial is the same as the elevation of the pole, or latitude of the place.

The distance of the zenith from the pole (called *the zenith distance of the pole*) is equal to the difference between the elevation of the pole and 90°; at London, 38° +; at Edinburgh, 34° +. And this is equal also to the elevation of the equinoctial above the horizon on one side, or its depression below the horizon on the other side of the heavens.

Thus, at London, the terrestrial latitude, elevation of the pole, and zenith distance of the equinoctial, are each 51° 32′ +. The zenith distance of the pole, elevation of the equinoctial above the horizon, and its depression below the horizon, are each 38° +.

That part of the heavens, which lies between the pole and a parallel of declination the same distance from the pole as its elevation at the place, *never sets*. Thus, at London, the stars from the north pole, 51° 32′ all round, can always be seen on a clear night. A parallel 51° 32′ from the pole is 38° 30′ from the equinoctial, that is about 38° +, D. N. If we look for that parallel on a map of the stars, we shall find north of it all the stars which may be seen at London.

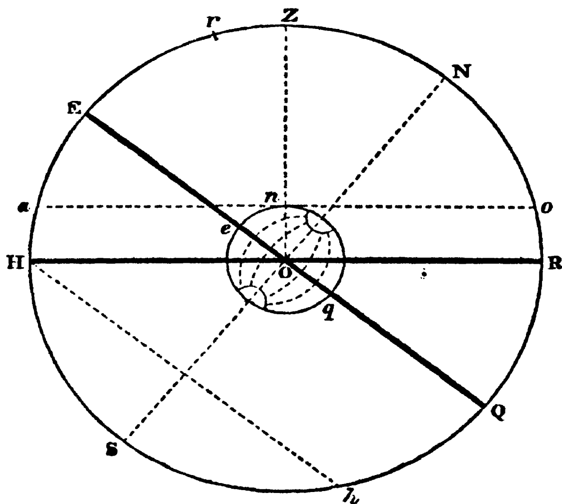
A like part of the heavens around the opposite pole *never*

rises. Thus, at London, the stars, 51° 32′ all round from the south pole, or all those beyond 38° + D. S. are never seen.

The part of the sky forming the intermediate belt is sometimes above, sometimes below the horizon of the place. That belt extends as many degrees on each side of the equinoctial as there are degrees in the elevation of that line above the horizon. Thus, at London, the stars in the belt of sky from 38° + D. N. to 38° + D. S. (a breadth of 76° +), are sometimes above, sometimes below the horizon.

This will be understood from the following diagram:—

Diagram 4.



Let the small circle in the middle represent the earth. *n* an observer on its surface, about the latitude of London or Edinburgh; the great outer circle, his celestial meridian; then Z will be his zenith. Let N be the north pole of the heavens, S the south pole, and let E Q represent the plane of the equinoctial; the part where it crosses the earth (*eq*) will represent the earth's equator. From E to N will be 90°, and from Q to N also 90°. From S to E and to Q will be the same number of degrees, making 360° all round.

The dotted line *a o* will be the *sensible horizon* of the observer at *n*; the points *a* and *o* being the parts of the sky below which he could not see the heavens for the earth interposing. Let H O R be a plane parallel to that of the sensible horizon, but passing through the centre of the earth. It is plain that, if the

inner circle representing the earth were smaller, the place of the observer, *n*, and also the line *a o*, would be proportionably nearer to H O R; and that if the space in the diagram occupied by the earth were reduced to a mere point, the lines (or planes) *a o* and H O R would coalesce. Now this is actually the case with respect to the horizon of any place on the earth and the starry heavens. The distance from the earth's surface to its centre is as nothing—a mere point—in relation to the distances of the stars; and hence, in relation to them there is no practical difference between the sensible horizon *a o*, and a plane parallel to it passing through the earth's centre, which is called the RATIONAL HORIZON, and is represented by the line H O R in the diagram. We may therefore reason with respect to the starry heavens and the positions of the earth in relation to them, as if the observer at *n* were at the earth's centre O, and as if the distances *a* H, *o* R in the sky, and *n* O were reduced to nothing.

H and R being the points where the horizon meets the sky, the distances from Z to H and to R will be 90° each.

From Z to R being 90°, and from E to N 90°, taking away the arc Z N, which is a part of each, there will remain the arc N R, the elevation of the pole, equal to the arc Z E, the zenith distance of the equinoctial; which it is manifest is the same number of degrees in the celestial meridian as *n e* on the terrestrial meridian, *which is the latitude of n.*

Since H Z, E N, and N Q are 90° each, by taking E Z from each of the first two, and the equal arc N R from the last, there remain E H, the elevation of the equinoctial above the horizon, Z N, the zenith distance of the pole, and R Q, the depression of the equinoctial below the horizon, all equal to each other, and equal to the difference between the elevation of the pole and 90°.

Now, in considering the apparent daily rotation of the sphere of the heavens, we may regard the observer at *n*, or rather at O, as fixed, and his horizon H O R as shutting out from his view all below the line H O R. Also, the points N and S, the poles of the heavens, maintain the same places. Hence, in rotating, all the stars from N by *o*, R, Q, and *h*, to S, will in 12 hours have come to like distances from N and S on the other side of these points, along the line N Z E *a* H S; and stars on that latter line will be on the opposite line from N by Q to Z.

A star at *r* (the same distance from N as R) will in 12 hours be at R, just on the horizon; stars at R will have been elevated to *r;* and all north of these points will have continued above the horizon during the whole rotation; that is, *always*, to the observer at the place *n*.

The stars from R by Q to *h* will in 12 hours come to the position *r* E H, any star at *h* being just upon the horizon at H, and the stars from *r* to H then sinking below the horizon, as from R to *h*.

The stars from *h* by S to H, in the rotation of the celestial

sphere, evidently cannot rise above the horizon at all. They are never seen at the latitude of *n*.

It may easily be shown that the arcs S H, S *h*, are each equal to E Z or N R; and that the arc Q *h* is equal to each of the arcs E H, Q R, or Z N.

Thus at the latitude of *n*, the part of the heavens from *r* by N to R, never sets; the part from R to *h*, or *r* to H, is sometimes above, sometimes below the horizon; the part from H by S to *h*, is never above the horizon.

At London, VEGA just skirts the horizon when at the lowest point of its daily course; and CAPELLA, in the opposite quarter of the heavens, at its lowest point, is about 7° above the horizon; so that these two very bright stars are almost always visible in Great Britain, at about from 50° to 45° from the north polar star.

It must be observed that the motion of the earth round the sun, by which we undergo a change of place to the extent of no less than 184 millions of miles, makes no sensible difference in the relative positions of the earth and heavens. That enormous distance is but a mere point in comparison with the distance of the stars. At all times of the year, the pole of the heavens is in the same relative position to every place upon earth.

It will be observed, that though the stars in their daily rotations preserve the same relative positions at each place, they arrive at these positions at different times of the day; so that stars which are above the horizon during night at one season, are below the horizon during night, and cannot be seen, at another season. This arises from the time of one complete daily rotation of the starry sphere being a little different from the time occupied by the sun in its apparent daily revolution round the earth, which is called a solar day, and by which the periods of night and day and our divisions of the day are determined.

CHAPTER II.

THE CONTENTS OF SPACE.

THE old notions which prevailed so long, that our Earth is a vast extended plain, round which the heavens revolve daily, and that the Sun and Stars, as well as the Moon, are subordinate to the Earth, and exist only to minister to the wants of its inhabitants, have given place to much more extended ideas of the numbers, magnitudes, distances, and purposes of the heavenly bodies.

The Earth is now ascertained to be one of a number of bodies, several of them much greater than itself, which are

connected with the Sun,—an immense orb, upwards of a million of times larger than the Earth—and dependent in many respects on that great luminary. These together constitute the SOLAR SYSTEM, which extends through space, to a distance of about 2766 millions of miles from the Sun; or about 30 times the distance of the Earth from the Sun; which is 92 millions of miles. Five of the more brilliant stars which are usually visible to the naked eye, namely, MERCURY, VENUS, MARS, JUPITER, and SATURN, belong to the Solar System. They are readily distinguished by the following marks; they are usually very near the ecliptic,—do not twinkle,—expand into a disc of sensible breadth when viewed through the telescope,—and have a motion among the stars, besides their apparent daily motion with the whole heavens round the earth, so that they appear in different constellations, at different times. Such stars are called *planets* from the Greek word *planetes*, *wanderer*. Other stars apparently more irregular in their movements, called *comets*, and bodies called *aerolites*, make up the Solar System, which will be described in Chapter IV.

The other stars which are usually seen in the heavens are called FIXED STARS, because they always appear to preserve the same positions in relation to each other. The stars in the constellation "Great Bear" appear to the oldest man living to be clustered in the same form as in his childhood. We know from good records that that form has not materially altered for hundreds of years. We have reason to believe that all the great constellations appear to us now just as they did to the astronomers who, long before the Christian era, arranged the stars in constellations, and gave them the names which they still bear,—names derived from the great heroes and heroines of antiquity, and so stamping on the heavens in indelible characters the great deeds and beautiful fables of old times.

The fixed stars are known to be at enormous distances. VEGA is at a distance of upwards of seventy-five millions of millions of miles (75,000,000,000,000 miles) from our system —nearly a million of times the distance of the earth from the sun. The nearest of the fixed stars whose distance has been subjected to measurement (α Centauri) is yet 21 millions of millions of miles from the sun. And it is probable that many of the fixed stars are at distances far beyond these; becoming visible to us only by their great magnitude or brilliancy. When viewed through the telescope, they only appear brighter; they do not expand into sensible discs, as the planets do.

Bodies so distant cannot shine by reflecting light received from our sun. They must be luminous in themselves—many of them much larger and brighter than our sun; and they are believed to be themselves suns, probably performing, in the grand and wonderful scheme of creation, parts similar to that performed by the great centre of our solar system.

Those which are visible to the naked eye are divided into six *magnitudes*, as they are called, according to their brilliancy. About twenty are reckoned as of the first magnitude, of which *eleven* are visible in Great Britain. It is supposed that not so many as 2000 are at any time visible to the naked eye; but the telescope brings myriads into view. The pole-star is of the second magnitude.

The "fixed stars" are not absolutely fixed. Many of them change their positions in relation to each other. But this change, called their *proper motion*, is so very slight, that it must go on for thousands of years before it amounts to a change in position sensible to the naked eye. ARCTURUS moves north about 2″ yearly, that is 1′ in thirty years, or 1° in 1800 years. Though apparently a slight movement, from the great distance—that very distance shows us that it must in reality be an extremely rapid motion—perhaps more rapid than any motion in our own system.

Some of those fixed stars which appear single when viewed through an ordinary telescope, become resolved into a cluster or multitude of stars when examined by a powerful telescope. Perhaps each of these is a sun—the whole being a system of suns, separated by vast distances, but apparently near each other, in consequence of their enormous distance from us. These are called *Stellar Nebulæ*, that is nebulæ resolvable into separate stars.

Other stars, more properly called nebulæ, appear as thin cloudy-looking masses of vapour. These, it has been conjectured, may be gaseous matter in the process of formation into suns with their attendant planets; and the new science of Spectroscopy has recently proved this supposition most triumphantly.

Some stars are termed MULTIPLE stars. These consist of two or more close to each other, and performing regular revolutions in orbits round each other, or rather round their common centre of gravity; and for several of them the periods of such revolutions have been calculated. In one or two instances, a complete revolution has been gone through since this great discovery was made by Sir W. Herschel about the close of the last century. A pair of such stars is usually called a *Binary* star, as distinguished from a *double* star, when the two component members may appear close together, though no physical connexion exists; they may be very far apart, and merely appear, as seen from the earth, in the same direction.

Other stars are termed VARIABLE or PERIODICAL. Of these, some present the singular phenomenon of undergoing a regular alternate increase and diminution of lustre; while others disappear altogether for a time. These phenomena are attributed to rotation in these bodies, their surfaces being of different degrees of brightness at different parts—or to the

intervention of some large body revolving between us and them, which cuts off from them a portion of their light.*

Some stars, called TEMPORARY stars, have appeared for but a limited time, and have then disappeared entirely: several stars marked in old catalogues are not now to be seen in the heavens.

Several of the stars appear arranged in clusters, apart from the others, as the PLEIADES, in Taurus. The MILKY WAY owes its light to myriads of stars closely crowded together, of which, when viewed through powerful telescopes, it is found to be composed. Our star, the sun, is supposed to belong to that cluster which forms the Milky Way, being placed near the middle of it. The MAGELLANIC CLOUDS, two remarkable objects near the south pole of the heavens, are collections of clusters of stars.

Besides these bodies scattered about everywhere through the vast realms of space, it has been conjectured that a thin fluid called the ETHER, infinitely more rare than our atmosphere, is spread out through the intervening spaces, and that it actually exerts a certain amount of resistance to the motions of the heavenly bodies through it. But this, it must be remembered, is no more than *conjecture*.

Rays of light and heat, and probably other influences, are also traversing space in all directions, darting for years through millions of millions of miles,—linking together the most remote of the works of creation—and revealing to intelligent beings the existence of distant worlds—perhaps of worlds which have long since ceased to exist.

Light, subtle as it is, has been measured in respect to its velocity. By means of two distinct astronomical phenomena, it has been ascertained that the velocity of light is 186,400 miles in a second. Hence the rays of light which reach us

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* The second star β, in the constellation PERSEUS, is a variable star, the phenomena of which are visible to the naked eye. It is just on the margin of the Milky Way, on the side furthest from the north pole-star, and about the same distance from that star as VEGA. It is in R. A. 44°, D. N. 40°. It may be found by drawing a line from the pole-star in the direction of the letters *Per* in Diag. 3, page 392.

"The star, named ALGOL," says Herschel, "is usually visible as a star of the second magnitude, and such it continues for the space of 2 days 14 hours, when it suddenly begins to diminish in splendour, and in about 3½ hours is reduced to the fourth magnitude. It then begins again to increase, and in 3½ hours more is restored to its usual brightness, going through all its changes in 2 days, 20 hours, 48 minutes."

The star Omicron (o) of CETUS or the Whale, which is called MIRA, goes through its period in 334 days, disappearing altogether for a time. It is a star of the second magnitude when at its brightest. It is in R. A. about 32°, or 2 hours 10 minutes, D. S. 3° to 4°.

from the nearest fixed star, have left that star three years before they reach us, and inform us of its existence then. It has been calculated that light requires about 12 years to reach our system from VEGA.

It is possible that there may be myriads of stars so remote from our system, that their light has never yet reached the earth; while others, whose light still reaches us, may have been long since extinguished. There is no reason to suppose that the boundaries of the sidereal system (if it have a limit) are within reach of even the most powerful telescopes. The most remote stars which the best telescopes bring into view may owe their apparent minuteness not to inferior magnitude, but to enormous distance; and, perhaps an observer at the farthest of them would find the same appearance as we do, star beyond star, in countless myriads, and at distances, of which it baffles the mind to form any adequate conception.

The universe has no bounds that we can even fancy, and wherever we know it, it is full of matter and of motion. There is no point in space that has not some body in it, or some influence passing through it. There are no voids—no objects truly fixed. Life, force, and activity pervade the boundless realms of creation.

CHAPTER III.

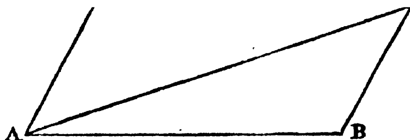
FORCES AND MOTIONS OF THE UNIVERSE.

1. DEFINITIONS.

A FORCE is whatever produces, or tends to produce, or prevent motion, or to change its direction. A single force acting on a body tends to make it move in a straight line. That line is called the DIRECTION or LINE of ACTION of the force.

When two forces act upon a body, it moves as it would if urged by a single force, represented in magnitude and direction by the diagonal of a parallelogram, the sides of which represent the magnitudes and directions of the two forces. Thus, if a force of the magnitude and direction of A C act upon a body at the same time as another of the magnitude and in the direction of A B, these two forces would produce exactly the same effect upon it as a single force represented in magnitude and direction by the

Diag. 5.

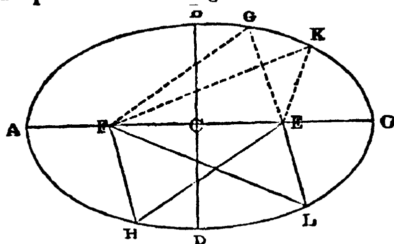


line A D. Finding a single force which will produce the same effect as two others, is called the COMPOSITION of FORCES: the two forces are called *components;* and the single force is called their *resultant.*

Motion is called UNIFORM when the moving body passes over equal spaces in equal times; ACCELERATED, when its velocity is increasing; RETARDED, when its velocity decreases. The MEAN MOTION of a body is the rate at which, moving uniformly, it would still pass over the same space in the same time.

AN ELLIPSE is a curved line, such, that the sum of two straight lines, drawn from two points within, to any point on the curve, shall always be the same. These two points are termed the FOCI of the Ellipse.

Diag. 6.



Diag. 6 represents an ellipse. F and E are its foci; and if G, K, L, be any points in its circumference, then G F and G E together will be of the same length as K F and K E together, or L F and L E together.

THE MAJOR AXIS of an ellipse is the straight line drawn through the foci, and terminated both ways by the circumference, as A O. The middle point of this line, C, is the CENTRE of the ellipse. The minor axis of the ellipse is the straight line through the centre at right angles to the MAJOR AXIS, as B D.

A TANGENT (or touching line) to a circle is a straight line which touches the circle, and being produced both ways, does not cut it,—that is, does not go into it. In Diag. 1 (page 9), D K and P H Q are tangents. A tangent of a circle is at right angles to the diameter drawn through the point of contact. There may be tangents to other curve-lines as well as to circles.

The path or course in which a heavenly body moves is called its ORBIT. The orbits of the planets and comets are ellipses, the sun being in one of the foci.

THE EXCENTRICITY of a planet's orbit is the distance from the centre of the ellipse in which it revolves to either of its foci. In Diag. 6, if the ellipse represent the orbit of a planet, and F the position of the sun, F C is the excentricity.

The point of the planet's orbit farthest from the sun is called its APHELION, as O in Diag. 6—that nearest the sun, its PERIHELION, as A. These two points are sometimes called THE APSIDES.

A PENDULUM is any body suspended freely from a fixed point,

about which it swings backwards and forwards. It performs its oscillations (or vibrations) in equal times, however different in length they may be, so long as the pendulum continues of the same length—or the force which causes it to move remains the same. But if the pendulum be made shorter, or the moving force be greater, it will move more quickly—and *vice versa*.

CENTRE OF GRAVITY. There is a certain point in every body, which bears such a relation to the whole mass, that the same effects would ensue from its weight, if its whole mass were concentrated in that point—and a similar point may be found for any number of bodies connected together. That point is the CENTRE OF GRAVITY. It is the point through which the resultant of the forces of all its separate particles passes.

2. GRAVITATION.

(*Attractive, Central, or Centripetal Force.*)

Every particle of matter is imbued with a tendency to move towards every other particle, which is called the FORCE of UNIVERSAL ATTRACTION, or FORCE of GRAVITATION, or simply GRAVITATION.

This force is exemplified in the falling of a body when left unsupported in the air—in the downward force or pressure which every body exerts on those on which it rests, and which we call their weight.

(1.) *Gravitation acts in all directions*, spreading out from a body like rays from a luminous object. This is shown by a plummet suspended near the top of a high rock leaning towards the rock—by bodies tending towards the earth on every side—by the action of the moon in raising the waters of the ocean and forming the tides—by the phenomena observed in the mutual action of the sun, planets, and satellites—and by the consideration, that, as gravitation seems an inherent property of matter, it is not likely to act in one direction more than in any other.

On the earth's surface gravitation acts in one predominating direction—namely, towards the centre of the earth—giving bodies that strong and invariable tendency downwards called GRAVITY. This is not owing to any difference in *nature* between the mass of the earth and bodies upon it—but to the circumstance of that mass being so very great compared with that of any body on its surface, that all lateral attractions are overpowered by the overwhelming force of the immense mass under our feet. Also, lateral attractions neutralize each other, while the force of the earth's attraction is not neutralized by any opposite force equally near. The earth's centre is the CENTRE of GRAVITY of the earth; so that we may reason with respect to the earth's gravity as if its whole force were collected at its centre.

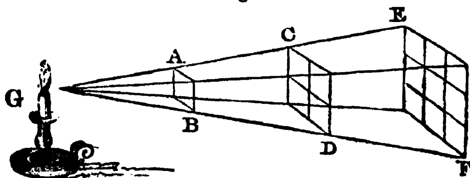
(2.) *The force of gravitation is in direct proportion to the quantity of matter or mass*—that is, any body will exert twice the force that its half would, three times the force that its third would, and so on.

(3.) *The force of gravitation is in inverse proportion to the square of the distance.* This means that the attraction between two bodies placed successively at different distances, is as much *greater* as the square of the distance is *less*—or as much *less* as the square of the distance is *greater*. Thus, the force of attraction between two bodies at any distance, called 1, is as much greater than their attraction at a distance of 2, as the square of 2 (4) is greater than the square of 1 (1) in like manner,

Attraction at distance,	Attraction at distance,		
7	3	:	49

The diminution, in the above proportion, of an influence radiating from a central point, may be illustrated by the following diagram. Let G represent any luminous body; A B, C D, and E F, boards at the same successive distances as A B from G; A B being at 1, C D at 2, E F at 3. The same light which spreads over A B, would at C D, *twice* the distance,

Diag. 7.



spread over *four* times the surface; at E F, *thrice* the distance, it would spread over *nine* times the surface. But the same amount of light diffused over 4 times the space will have only 1-4th of the intensity, over nine times the space, 1-9th of the intensity. Hence the strength of light at 1 is to that at 3 as 9 is to 1, or (which is the same) as 1 to $\frac{1}{9}$.

This great force is known to extend to the utmost limits of the solar system; and from the phenomena of multiple stars, is believed, combined with the force to be next described, to prevail in the most distant regions of space. As it tends to draw the planets towards the centre round which they revolve—the sun—it is called a CENTRAL, or CENTRIPETAL (centre-seeking) force. If acting alone, it would precipitate the moon on the earth, and all the planets on the surface of the sun. But its action is restrained by the operation of the centrifugal force.

3. The Centrifugal Force.

(Called also, *Projectile* or *Tangental* Force.)

As a single force causes a body to move in a straight line, and the planets move in curved lines, they must be impelled by some other force besides that of gravitation.

This other force is called *centrifugal* (centre-flying), because its tendency is to make the planet fly from the centre round which it revolves; *tangental*, because the line in which the planet would move, were the central force to cease to act, would be a *tangent* to the curve or orbit in which it previously moved. It is called *projectile*, as it tends to throw the body out of its orbit, and resembles the force with which a projectile is impelled from the surface of the earth.

Thus, in Diag. 8, if A be a body moving round F, in the circle A, B, C, D, and if, the body being at A, the projectile force were suddenly to cease, the central force would draw the body in the line A F to the centre. Were the central force to be suspended when the body was at A, the projectile or centrifugal force would carry the body out of the orbit, in the line A G, a tangent to the circle at the point where it was when the central force ceased.

Diag. 8.



In giving the planets their orbitual motions, these two forces act on the principle of the composition of forces. Any curved line may be considered as made up of a number of infinitely small straight lines, which will be the diagonals of a series of parallelograms, whose sides will be lines in the directions of the centripetal and centrifugal forces at each point, and of lengths proportionate to the intensities of these forces. As the directions of the tangent and radius change at every point, the body enters every moment upon a new diagonal, the series of which will form the curve which it describes in its orbit.

4. Orbitual Motions of the Planets.—Kepler's Laws.

The following general laws are found to prevail throughout the solar system. They were discovered by Kepler, a celebrated astronomer, who flourished during the early part of the seventeenth century.

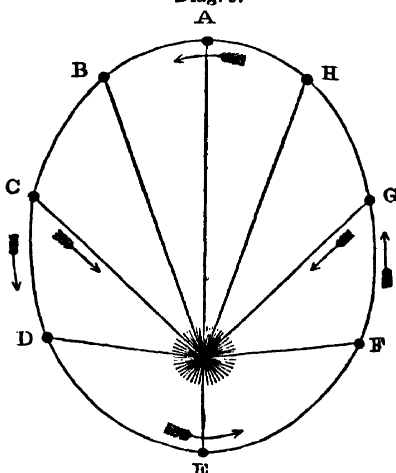
1. The planets move round the sun in such a manner, that the line drawn from a planet to the sun (called *radius vector*), passes over areas proportional to the times of the motions;—that is, describes equal areas in equal times.

2. The orbits of the planets are ELLIPSES, having the sun in one of the foci.

3. The squares of the periodic times of the planets are in the same proportion as the cubes of their mean distances from the sun.

The *radius vector* of a planet is an imaginary straight line from the sun to the planet, supposed to remain fixed at the former, but to follow the planet in its course round that orb, expanding or contracting according to the planet's distance from the sun.

Diag. 9.



In the accompanying diagram, let S be the sun, and A, B, C, D, E, F, G, H, successive positions of a planet revolving in the ellipse A C E G. S A, S B, S C, etc., will be the radius vector in these several positions. Now, if it be supposed that the planet has moved from B to C in the same time as from D to E, then, by Kepler's *first* law, the radius vector in passing from the position S B to S C, has passed over the same space (or area) as in passing from S D to S E—that is, the area S B C is equal to the area S D E; and so on.

From this, and from Kepler's *second* law that the orbits are ellipses, the important truths are derived, that a planet does not move round the sun at a uniform rate—that its motion is at one time accelerated, at another retarded. For, as the planet is at different distances from the sun at different parts of its orbit, and its radius vector describes equal areas in equal times, any area, when the planet is near the sun, is broader than an equal area when the planet is remote; the part of the orbit which bounds the broad area must be longer than that which bounds the narrow one; and as they are both described in the same time, the planet must move more quickly when in that part nearest to the sun.

The velocity of a planet is least when farthest from the sun—becomes accelerated as it becomes nearer—is at its highest when the planet is nearest to the sun, and retarded as its distance from the sun increases.

The *third* law of Kepler describes the relation between the

distances of the planets from the sun and their periodic times or periods; that is, the times occupied by the planets in completing their revolutions round the sun.

This law signifies, that the square of the number of days which any planet takes to complete its revolution round the sun, is to the square of the number of days which any other planet takes to move once round the sun, as the cube of the distance of the first planet from the sun, to the cube of the distance of the second planet from the sun.*

Or, in the case of Mercury and the Earth,

square of		square of		cube of		cube of
88	:	365	: :	35	:	92

88 and 365 are the respective number of days in the periods of Mercury and the Earth—35 and 92, their respective distances from the sun, in millions of miles.

5. Rotatory Motions and Forms of the Heavenly Bodies.

The sun, planets, and satellites have a motion of rotation by which they turn upon themselves in various periods called the Day of the rotating body; this motion goes on simultaneously with their motion in space, just as the wheel of a carriage rotates while moving onwards, or a ball in rolling along the ground.

That the sun and planets have this rotatory motion is known from the observed motion of spots upon their surfaces; and the time of rotation, or *day* of the body, is found by noting the time which a spot takes to move through an arc.

That they have this motion, may also be inferred from their forms, which are such as would be produced by a rotatory motion: they are Spheroids, and the flattening (or polar compression, as it is called) is at the poles or ends of the axis, which is the shortest diameter. The diameter through the planet at its equator is the longest: each body bulges out more or less at its equator.

The parts at the surface of a rotating body move with different degrees of rapidity, and consequently different degrees of force. The polar points do not move out of their places, but simply turn round; each point describes a larger daily circle of rotation as it is nearer the equator. Thus, while a person at the equator of our earth is carried 24,897 miles in his daily rotation, a person at the arctic circle is carried only about 10,100 miles in the same time.

Thus, every part of the surface of a rotating body has a tendency to fly off from the surface (just as a planet has a tendency

* The square of a number is the number produced by multiplying it by itself—as, 9 is the square of 3. Its cube is the number produced by multiplying it twice by itself; 27 is the cube of 3.

to fly off from its orbit) in a tangental direction; which tendency increases towards the equator. By the force of gravitation in the planet, the parts at the surface have also a tendency towards the centre, in the direction of the radius. Under the influence of these two forces, the parts tend to a middle course, which brings them from the poles towards the middle regions, and causes an accumulation or bulging out at the equator.

It is supposed, from geological considerations, that the earth assumed this spheroidal form while it was mainly or entirely in a fluid state; and at one time the opinion was held that the interior of the earth remained a molten mass; but according to mathematicians that opinion is no longer tenable.

The rotatory motion lessens the force of gravity towards the equatorial regions of a planet: 1. By the greater centrifugal force imparted to these regions, which in some degree neutralizes the central force or weight of a body. 2. By the alteration of form, which brings the polar regions to be nearer to the planet's centre of gravity—its centre.

This difference between the polar and equatorial regions in the force of gravity cannot be shown by an ordinary balance, as the weights used would be as much affected as the body to be weighed. But it is proved by the spring-balance or by the pendulum. The spring is more stretched by any body, and the pendulum moves more quickly, in proportion as it is nearer to the poles, showing an increase of gravitating force in that direction.

The spheroidal form of the earth is also proved by the increase in the length of the degree of latitude in passing from the equator to the poles. If the earth were a true sphere, arcs in the celestial meridian would correspond with arcs of like numbers of degrees in the terrestrial meridian, which is found not to be the case. On going due north or south, the change in the height of the pole does not vary exactly in proportion to the distance north or south moved over. And the deviation from exact correspondence indicates a flattening towards the poles of the earth.

Besides gravitation, the force of HEAT spreads throughout the solar system, and on our earth at least and in some of the comets, gives rise to motions among the particles, which occasion various important and interesting phenomena. Though we know little of its operation in other parts of the solar system or universe, its action, as a probable element in astronomical changes, must not be overlooked in enumerating the forces of the universe.

HEAT, LIGHT, and GRAVITATION link us with far distant worlds; and perhaps there are still other influences, also binding together in one connected chain the remote parts of creation. It has recently been discovered that MAGNETISM is such an influence. (See p. 465.)

CHAPTER IV.

THE SOLAR SYSTEM.

THE Solar System consists of the SUN and certain other heavenly bodies which are connected with that luminary; namely, PLANETS, SATELLITES, COMETS, AEROLITES.

The planets, comets, and aerolites revolve round the sun in regular periods of time, receive light and heat from him, and are preserved by his attraction in their proper orbits.

The PLANETS at present known, 245 in number, are VULCAN, MERCURY, VENUS, the EARTH, MARS, the PLANETOIDS (of which 236 had been discovered up till May 1884), JUPITER, SATURN, URANUS, and NEPTUNE. They are here named in the order of their distance from the sun. All these are visible to the naked eye except Vulcan, the Planetoids, Uranus, and Neptune.

All the planets move round the sun in the same direction as the earth—*west by south to east;* and their rotations on their axes are in the same direction—west to east. Their orbits are ellipses, but with the major and minor axes nearly equal, so that they are not far from being circles.

The planes of the orbits of the planets are not much inclined to that of the earth's orbit; but all are inclined to it a little, so that one-half of a planet's course lies north of the plane of the ecliptic—the other half, south of it. The points where a planet crosses the plane of the ecliptic are called its NODES.

From the orbits of the planets being little above or below the plane of the ecliptic, they are usually near the ecliptic, few being beyond the zodiac.

From the earth as well as each of the planets being in motion round the sun, the planets appear at times to be actually *stationary* in the heavens, or even to move back (in a *retrograde* direction). But these apparent irregularities can be explained and calculated; and the real motion is from west to east through the sky, near the ecliptic.

The planets appear to be worlds like our earth. They are opaque and dark in themselves, but shine by reflecting the light received from the sun. This is known by the PHASES which they present (see the Moon). A planet varies in the extent of its illuminated surface which is turned towards us: and of the side next us, that part only appears luminous which is also turned towards the sun, so as to be receiving light from him. These varied appearances are called PHASES.

The SATELLITES are the smaller planets which revolve round some of the preceding planets as their centres, as our moon round the earth. They are sometimes called *moons,* or *secondary* planets, in contradistinction to the others, which are then considered as *primary.*

The satellites at present known are eighteen in number. The Earth has one ; Jupiter, four ; Saturn, eight ; Uranus, four ; Neptune, one.

The COMETS also revolve round the sun, but in very elongated ellipses, or parabolas ; they are often beyond the zodiac, and do not appear to be of the same solid substance as the planets and satellites. The number of comets is very great.

AEROLITES OR METEORIC STONES are supposed to be fragments revolving round the sun till they come within the sphere of attraction of some planet, when they are drawn out of their course and precipitated on its surface.

THE ZODIACAL LIGHT is a faint luminosity in the sky, visible in the west, immediately after twilight in spring ; and in the east, towards the close of autumn, just before sunrise. It is very distinct in tropical regions. It is now supposed to be a vast nebulous ring having the earth for its centre, and lying within the orbit of the moon, but its real nature is still uncertain.

THE SUN ; SOL, OR ☉.

The sun is the centre of the solar system ; and is a globular body 852,000 miles in diameter. It turns on its axis in twenty-five days. Its mean distance from the earth is 92,000,000 miles ; and its bulk or cubic contents 1,275,000 times that of the earth. But its specific gravity is only one-fourth that of the earth. The force of gravity at its surface is 27·2 times that of the force of gravity at the earth's surface.

The sun is surrounded by a highly luminous atmosphere, from which emanate the rays which cause light and heat upon the earth. When examined through a telescope, large dark spots, which change both in size and form, are seen upon its surface. It now appears that the spots increase and decrease in frequency in *regular periods* of 10½ years ; that the periodic changes are closely allied to the changes in the *earth's magnetism*, the two being contemporaneous and of equal duration ; while by means of a new science called SPECTROSCOPY, astronomers have at length ascertained that the materials of which the sun consists do not differ from those composing our earth—his atmosphere containing the vapours of iron, copper, zinc, nickel, sodium, and other metals.

The sun has two *apparent* motions : one daily, through the sky, giving rise to the alternations of night and day, and caused by the earth's rotation on its axis ; another yearly, through the constellations of the zodiac, its centre describing the great circle of the heavens, called the ecliptic, which is caused by the earth's annual revolution round the sun.

It is now believed, that, besides its rotatory motion, the sun has a motion through space, towards the constellation Hercules, moving at the rate of 432,000 miles per day.

The Planets.

Vulcan was believed to have been discovered by astronomers in France in 1859, and was rediscovered by Professor Watson of Washington in 1878, but is as yet very imperfectly observed; it revolves round the sun at a distance of about 14,000,000 miles, and in a period of about 21 days. It is doubtful whether its substance (which is less than one-sixtieth of that of Mercury) is confined within one globe or consists of many small particles.

Mercury, ☿.—This small planet is 2962 miles in diameter, 35,649,000 miles from the sun, round which he revolves in about 87 days 23 hours, and turns on his axis in 24 hours 5 minutes. He can be seldom seen, and only for a short time; being so near the sun, he is always in that part of the sky close around the sun, and his inferior light is lost amid the sun's rays. He never departs above 29° from the sun; and when he is visible, can be seen only a little before sunrise or after sunset. Mercury exhibits well-marked phases, as the moon does, when viewed through the telescope at various parts of his orbit.

Mercury sometimes passes directly between the earth and the sun, appearing then as a black spot traversing the sun's surface. This is called a *transit of Mercury over the sun's disc.* It seldom takes place, as the orbit of Mercury is inclined about 7° to the plane of the ecliptic, so that the planet is seldom in that plane.

Venus, ♀.—This planet's diameter is nearly the same as that of the earth,—or about 7550 miles. She is 66,614,000 miles from the sun, revolves round him in 224 days 16 hours, and turns upon her axis in 23 hours 21 minutes. Venus is the most beautiful of the planets—whence her name—and, being near us, she appears as bright and large as Jupiter. She is never more than 47° from the sun, and hence is seen only before sunrise and after sunset, but for a longer time than Mercury. Seen before sunrise, Venus is called *Phosphorus, Lucifer*, or the *morning star*; when seen after sunset, she is termed *Hesperus, Vesper*, or the *evening star*. Venus exhibits well-marked phases. Her transit over the sun's disc, which takes place at irregular intervals, has been taken advantage of to aid us in determining the sun's distance. The first transit observed took place in 1639, but a previous one, which was not seen, is known to have occurred in 1631. The phenomenon was also observed in 1761 and 1769, and again in 1874. After the transit on December 6th, 1882, no similar occurrence will take place till June 8th, 2004.

Venus and Mercury, which are nearer to the sun than the earth, are sometimes called *inferior* planets—those which are farther from the sun than the earth being called *superior* planets.

THE EARTH (Tellus) ⊕.—The mean distance of the earth from the sun is 92,093,000 miles. Her least distance is 90,558,000 miles, on 31st December; her greatest distance, 93,628,000 miles, on 1st July. The mean velocity of the earth in her orbit being 1·00000, her velocity on 31st December is 1·03386; on 1st July, ·96614. She moves round the sun in 365 days, 5 hours, 48 minutes, 49·7 seconds. This is called the tropical or equinoctial year. (See Divisions of Time.)

The earth's orbit is 578,000,000 miles; and her daily motion in her orbit, 1,572,000 miles, or 65,533 miles an hour.

The mean diameter of the earth is 7912 miles,—the polar diameter or axis is 7899 miles,—the equatorial diameter, 7925 miles. The difference between the longest and shortest diameters is 26 miles—about 1-299th of the longer.

The earth turns upon her axis in 23 hours, 56 minutes, 4·09 seconds. This is a true or SIDEREAL day. (See Divisions of Time.) The equatorial parts of the earth move by the rotation about 1038 miles an hour.

The force of gravity at the equator is 1-289th less than at the poles by centrifugal force, and 1-590th from the spheroidal form. The sum of these two fractions is 1-194th, which is the amount by which a body at the poles weighs more than at the equator.

The axis of the earth leans 23° 27′ towards the plane of its orbit, making an angle of 66° 33′ with that plane. The amount of the inclination may be seen in Diag. 2, page 13. If *a o* be the ecliptic, then N S will represent the axis, making an angle of 23° 27′ with Z N, the perpendicular to the plane of the orbit; or, of 66° 33′ with *a o*, the plane of the orbit. Hence, the changes in the length of the day and night, and in the seasons. (See below, Chapter V.)

The earth's axis preserves the same direction during its whole yearly revolution, its position at any one time being parallel to its position at any other time. Yet it always points to the same part of the heavens during the year, the distance between the two opposite points of the orbit (184 millions of miles) being nothing in comparison with the distances of the stars.

THE MOON (Luna) ☽.—The diameter of the moon is 2158 miles, a little more than ¼ of the earth's diameter; and her mean distance from the earth is about 239,000 miles. Her distance from the earth varies at different points in her orbit by so much as 26,228 miles, her excentricity (see p. 457) being about 1-20th of her mean distance, or 13,114 miles.

The bulk of the moon is about 1-49th of that of the earth; and at the moon the earth will appear about 13 times larger than *she* does to us.

The moon performs her revolution round the earth in 27 days, 7 hours, 43 minutes, and turns upon her axis in the

same time. This is termed a *sidereal* month. The period from one new moon to the next, termed a *synodical* month, is 29 days, 12 hours, 44 minutes. (See below, Chapter VI.)

From the period of the moon's rotation on her axis being the same as that of her revolution round the earth (a law found in all other satellites), she always presents the same side to the earth. That side is never totally dark, having one fortnight of sun-light, and being illumined by the earth the other fortnight. The other side has alternately a fortnight of sun-light, and a fortnight of darkness.

The moon's orbit makes an angle of 5° 8′ with the plane of the ecliptic; and her axis is nearly perpendicular to the plane of the ecliptic, so that she can have little change of seasons, or variation in the length of the day.

MARS, ♂.—The diameter of this planet is 4920 miles, and his mean distance from the sun is 140,000,000 miles. His excentricity is considerable, being nearly 1-10th of the mean distance. He performs his revolution round the sun in 686 days 23 hours, and rotates on his axis in 24 hours 37 minutes.

Mars shines with a reddish light, and, though a small planet, often appears bright, as he is near the earth. He does not exhibit PHASES like those of Mercury, Venus, or our Moon, being an outside planet to the Earth, and being therefore always seen in a nearly full-moon state of illumination; he possesses an atmosphere; while on his surface there are clear indications of continents and oceans. Mars leans 28° 51′ towards the plane of his orbit, and has therefore considerable variety in his seasons. Two attendant satellites have been discovered. The nearer revolves round the primary planet in 7 hours 38 minutes; the more distant in 30 hours 14 minutes.

PLANETOIDS.—236 small planets have been discovered revolving between the orbits of Mars and Jupiter, viz., CERES, PALLAS, JUNO, VESTA, discovered in 1801-7; and ASTRÆA, HEBE, IRIS, FLORA, and 228 others discovered since 1845.

The diameters of the Planetoids are generally too small to admit of measurement, that of the largest being under 230 miles; their mean distances from the sun, from 202 to 312 millions of miles; and their periods of revolving round him, from 3½ to 6½ years.

These bodies are extremely small, while, generally, the planets rather increase in size as they are more distant from the sun; they are all at nearly the same distance from the sun; their excentricities are considerable; and their orbits are greatly inclined to the plane of the ecliptic, whereas the orbits of the other planets nearly coincide with that plane. The orbit of Pallas makes an angle of 34° 42′, with the earth's orbit, and the inclinations of the orbits of most of the other planetoids are considerable.

JUPITER, ♃.—The equatorial diameter of this, the largest of the planets, is 88,400 miles, and his mean distance from the sun 479,000,000 miles. He revolves round the sun in 4332½ days, or a little less than 12 years; and turns on his axis in about 10 hours (9h. 56m.). The polar diameter of Jupiter is about 1-18th, or 5000 miles, less than the equatorial, which is attributed to the great centrifugal force caused by his very rapid rotation on his axis; and, when viewed in the telescope, he appears of a distinctly oval form.

The axis of Jupiter is nearly perpendicular to the plane of his orbit; so that his seasons can exhibit but little variety. Near his equator, and parallel to it, a number of zones or striæ are observed, called BELTS, subject to considerable variations, and supposed to be caused by the vast central heat of the planet, which has only partially cooled down.

Jupiter is attended by four SATELLITES or MOONS, which cannot be seen by the naked eye. They were discovered by GALILEO in 1610, shortly after the invention of the telescope. They are from a quarter of a million to upwards of a million of miles from the planet; they revolve round him in periods of from a little less than 2 days to 16 days; and they are of about the magnitude of our moon.

When the body of Jupiter interposes between the sun and any of his satellites, that satellite will disappear from our view, or be eclipsed. These eclipses afford an accurate method of finding the longitude of places on the earth's surface; and have led to the great discovery of the velocity of light. These eclipses take place sooner when Jupiter is near the earth than when he is remote; and the difference has been attributed to the greater time which light takes to reach us from Jupiter's greater distance; the rate of movement of light being thence inferred,—186,400 miles in a second.

SATURN, ♄.—The equatorial diameter of Saturn is 72,000 miles; his mean distance from the sun, 878,000,000 miles. He moves round the sun in 10,759 days (29½ years), and turns on his axis in 10 hours 29 minutes.

Saturn is accompanied by a very remarkable object, a stupendous RING, or rather a series of concentric rings, all lying in the same plane, and rotating on their axis in nearly the same time as the planet. This extraordinary phenomenon long puzzled astronomers, but recent researches have resolved the rings into myriads of minute bodies, which may be termed satellites, moving independently, and each in its own orbit, around the primary.

Saturn has eight satellites, one of which, much larger than the rest, is 3300 miles in diameter; at a distance of from 120,000 to 2,314,000 miles from the body of the planet, and revolving round him in periods of from about a day to 80 days.

URANUS, ♅.—The diameter of Uranus is about 33,000 miles, his mean distance from the sun 1,753,851,000 miles. He moves

round the sun in 30,686 days, or about 84 years. He is attended by four satellites; of which some present the remarkable peculiarities, that the planes of their orbits are nearly perpendicular to the plane of Uranus's orbit, and move round him from *east* to *west*, while all other motions throughout the solar system take place from west to east. This planet, which is not visible to the naked eye, was discovered by Sir William Herschel in 1781.

NEPTUNE, ♆.—The diameter of Neptune is 36,620 miles, his mean distance from the sun 2,766,000,000 miles; and he moves round the sun in 60,126 days, or about 164 years. One satellite of this planet has been discovered. His existence was predicted simultaneously by Adams and Leverrier in 1846; his orbit, position, and mass having been *inferred* from irregularities in the motions of Uranus. The telescope revealed him in the position thus indicated, and, on examining astronomical records, it was found that he had been previously observed by astronomers, though not known to be a planet.

COMETS.

Comets are so named from the Greek word *coma*, hair. They exhibit a brilliant luminous point, called the *nucleus;* a more diffuse light surrounding the nucleus, called coma or hair; and, often, a long luminous appendage, called the tail, turned from the sun. They are supposed to be masses of vaporous matter, or of solid nuclei, surrounded by much aerial matter. Stars have been seen through their substance; and they have passed near the satellites of Jupiter without deranging the motions of these bodies, while they themselves have been diverted from their course;—indications that they are mostly of aerial matter, and their mass small. The new science of Spectroscopy has demonstrated that the comets shine partly by reflecting the light of the sun, and partly by their own inherent or proper light. They revolve in orbits of which the excentricity is great, being greatly elongated ellipses; so that at one time they approach very near the sun, and at another recede very far from that body. The periods of several have been calculated, as that of HALLEY'S comet, which moves round the sun in 75 years, and returned to our view, as predicted, in 1835;—ENCKE'S and BIELA'S, which perform their courses round the sun in 3⅓ and 6⅔ years. The latter passes little beyond the orbit of Jupiter.

CHAPTER V.

DAY AND NIGHT—SEASONS.

1. *Day and Night.*

THE regular alternation of a period of light, called DAY, and of a period of darkness called NIGHT, is caused by the earth's rotation on its axis, which turns each part alternately *towards* the sun, and *from* the sun.

The daily circle through which each person passes in consequence of the earth's rotation, is his *parallel* of *latitude ;* and the proportion of his night to his day at any time depends upon the manner in which that parallel lies, as regards the TERMINATOR.

It must be remembered that the terminator is a great circle extending round the world, always ninety degrees from the place at which the sun is vertical.

If, in rotating, the terminator does not cross his parallel at all, he will then have *no day*, or *no night*, according as he is on the dark or illumined side of the terminator ; if the terminator cuts his parallel unequally, he will have his day and night unequal at that time ; but if it cuts his parallel into two equal parts, he will then have equal day and night.

As every great circle on a sphere cuts every other great circle into two equal parts, the terminator must always cut the equator into two semicircles, one dark, the other illumined, so that *day and night at the equator are always equal,* or, each is of 12 hours' duration.

At 20th March and 23rd September, the sun is vertical at the equator ; so that the terminator passes through both poles and cuts *every parallel* into two equal parts. Hence, there is equal day and night all over the world at these periods, called THE EQUINOXES. At 20th March, the vernal equinox, the sun enters the sign ARIES ; the first point of which is where the sun's centre crosses the equinoctial at that date. At 23rd September, the autumnal equinox, the sun enters the sign LIBRA, the first point of which is where the sun's centre crosses the equinoctial at that date.

At other times, the sun is vertical at some point north or south of the equator; the terminator then *extends beyond* one pole, and *falls short* of the other pole. Some parallels are not cut by it at all;—at these there is no day or no night;—the other parallels are cut unequally, and at these day and night are unequal.

Day and night are more nearly equal in proportion as the time is nearer to an equinox, or the place nearer the equator.

From the arctic to the antarctic circle, that is, in the torrid and temperate zones, there is always some day and some night during each rotation (every 24 hours), however unequal they may be.

Within the polar circles, at one time there is both day and night in each rotation,—at another, no day, the sun remaining below the horizon for several rotations together,—at another time no night, the sun remaining above the horizon for several rotations together.

At the poles, there are six months day, and six months night.

The northern and southern hemispheres are always in exactly opposite states, at corresponding latitudes north and south, in respect to day and night.

The tropics of Cancer and Capricorn are the farthest north and south parallels at which the sun is vertical. As these are 23½° from the equator, the terminator, when the sun is on (that is vertical at) a tropic, will extend 23½° beyond one pole, and fall 23½° short of the other. These will be the greatest distances of the terminator from the poles, and at these distances the polar circles are drawn. When the sun is on a tropic, the terminator just skirts these circles, all within one being dark and having no day, and all within the other being illumined, and having no night.

The sun is on the tropic of Cancer on the 21st of June, when he enters the sign Cancer, the first point of which is at the greatest distance which he reaches north of the equinoctial (D. N. 23½°). This period is called the SUMMER SOLSTICE. The sun is on the tropic of Capricorn on the 21st of December, when he enters the sign Capricornus; the first point of which is at the greatest distance he reaches south of the equinoctial (D. S. 23½°). This period is called the WINTER SOLSTICE.

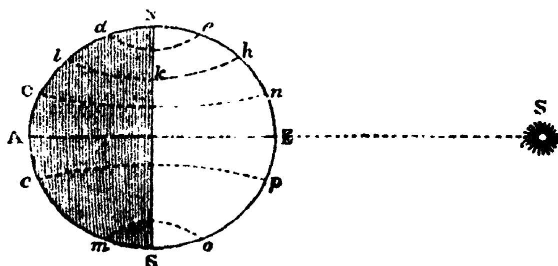
From 20th March to 23rd September, there is long *day* in the northern hemisphere; its length increases from 20th March to 21st June, and then decreases. Within a distance from the north pole,—daily increasing up to 21st June, when it extends to the arctic circle, and then decreasing from that date,—there is constant *day;* and the north pole has continual *day* during these six months.

Substituting the word "night" for "day," the description in the preceding paragraph applies to the southern hemisphere; if for "north pole," and "arctic circle," we read, "south pole," and "antarctic circle."

Substituting "23rd September" for "20th March," "20th March" for "23rd September," and "21st December" for "21st June," and the word "night" for "day," the above description applies to the northern hemisphere; retaining the word "day," it applies to the southern hemisphere.

The following diagrams will illustrate these relations of the various parts of the earth to day and night at different times of the year.

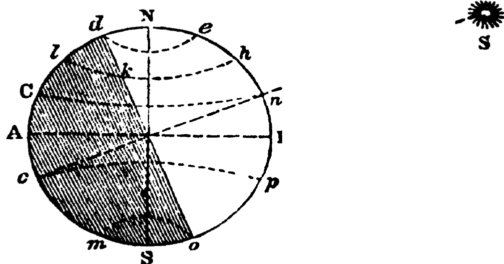
Diag. 10.



Let the preceding diagram represent the position of the earth and sun at 20th March or 23rd September. The sun's rays are perpendicular at the equator, or, in other words, he is vertical there. The terminator, N S, passes through both poles, coinciding with a meridian circle, and cutting every parallel into two equal parts. If a person at *l* be supposed to be at his midnight, in 6 hours he will have come to *k* by rotation, where he will meet the terminator and have sunrise; in 6 hours more, he will be at *h*, his midday, with the sun on the meridian; in 6 hours more he will be at the terminator on the other side, having had 12 hours day—and in 6 hours more he will be back at his midnight *l*.

The following diagram represents the state of matters when the sun is vertical at Cancer, 21st June:—

Diag. 11.



The letters indicate the same parts as in the preceding diagram; *k* meaning in both cases the point where the person on the parallel *l h* meets the terminator. Here, the terminator, *d k o*, extends 23½° beyond the north pole, N; and falls 23½° short of the south pole, S; skirting the polar circles; but leaving the whole of the antarctic circles in darkness, while all the arctic circle is illumined. A person at *l*, which represents his midnight, now comes to *k*, where he meets the terminator, before he has made a quarter of a rotation; and from that time till he arrives at his midday, *h*, he has more than 6 hours day. His six in the morning is where he crosses the meridian N S. In like manner, in continuing his rotation he does not reach the terminator till *after* another quarter of his rotation, that is, after six evening.

It will be observed that the terminator in this diagram, as well as in the last, cuts the equator into two equal parts; but that *from* the equator, both north and south, it gradually diverges from the meridian circle, the amount of divergence being greater as the distance from the equator increases; showing that day and night are more unequal the farther the place is from the equator.

At 21st December, the sun is perpendicular at Capricorn, *p* in the diagram; the terminator extends from *e* to *m*, leaving the arctic circle in darkness and the antarctic circle illumined; and the north and south hemispheres are in states exactly opposite to those described in explaining the last diagram.

Thus the terminator oscillates between the positions *d o* and *e m*, always, except at 20th March and 23rd September, leaving a certain distance from either pole in constant darkness or constant light for the 24 hours; these parts increasing in extent as the terminator lies more obliquely and the time approaches the solstices, when all within the polar circles is in one or other of these conditions.

2. *Seasons.*

That regular alternation of different kinds of weather, which takes place during the course of the year, is termed *change in the seasons.*

The cause of the changes in the seasons is the varying extent of the sun's influence at different times. The sun's influence is proportionally greater, 1. The higher he is above the horizon of a place; 2. The longer he remains above its horizon. In the northern hemisphere, the sun rises higher and remains daily longer above than below the horizon, from March to September; we have then warm weather or summer. From September to March, the sun rises little above the horizon, and is longer below it than above it daily; we have then winter in the northern hemisphere. The southern hemisphere is in exactly the reverse state; having winter during our summer; summer during our winter.

When the sun is vertical at Cancer, he will rise higher above the horizon of those north of Cancer than at any other time, and will be lower, south from that parallel, the nearer the place is to the antarctic circle, where he does not appear above the horizon at all; as well as lower, north from that parallel, the nearer the place is to the south pole. As the sun recedes from Cancer, he gradually appears higher in the sky to those south of that parallel, and lower to those north of it, till he comes to be vertical at Capricorn; when, substituting north for south, and *vice versa*, matters are in the state just described. Every one has observed that the sun's elevation is greatest at midsummer, and that he gradually sinks till the 21st December, when he ascends but a little way above the horizon, after which his elevation again increases.

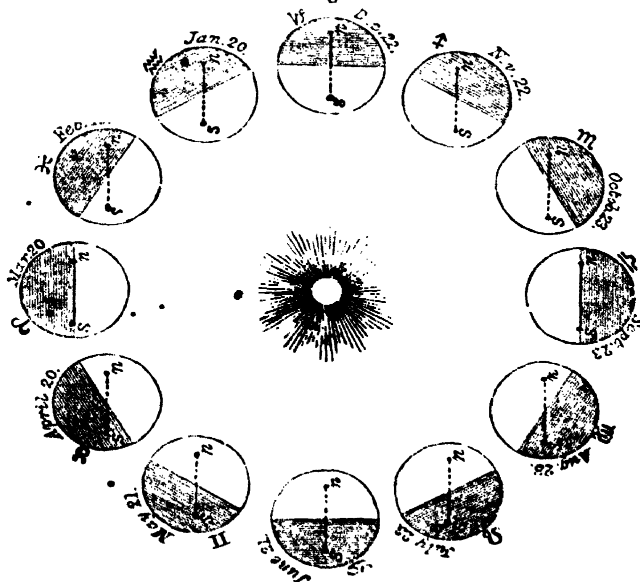
Although the earth is about three millions of miles nearer to the sun in winter than in summer, this makes no difference as to his influence in imparting heat, for as much heat is lost by our more rapid motion in winter, as is gained by our greater proximity to the sun; and *vice versa* in summer.

CAUSES OF THESE PHENOMENA.

The phenomena of the changes in the length of the day, in the height of the sun, and in the seasons, are produced by the combined operation of three causes:—1. The earth's axis being *inclined*, and not perpendicular to the plane of its orbit. 2. The earth's annual motion round the sun. 3. The earth's axis remaining always parallel to itself in all parts of its orbit.

From the inclination of the axis to the plane of the orbit, one pole *leans towards* the sun at one period, while the other is *turned from* him. When the earth has moved from that point round one quarter of her orbit, the axis will be placed sideways with respect to the sun, and each pole will be turned equally towards him. As the earth advances and completes another quarter, the poles now reverse their relative positions; the pole formerly turned towards the sun is now turned from it; and the other leans towards the sun. On completing another quarter, the axis will be again placed sideways toward the sun; and as she proceeds onwards, she gradually comes into the position occupied at first. All this will be better understood by the aid of the following diagram:*

Diag. 12.



* And best of all by *acting* it. This may be done with the floor for the plane of the ecliptic, and a cane in the proper position moved

The twelve outer circles are intended to represent the earth in twelve successive positions in its course round the sun. The line *n s* is a meridian, *n* the north pole, *s* the south. The terminator is seen 90° from the point at which the sun is vertical, leaving one half white in each figure illumined, while the other half, shaded, is in darkness. The line *n s* may also be taken to represent the axis seen to be at any time parallel to its position at any other time. The circle at the top represents the position of the earth at the winter solstice, the north pole within the dark half, and *turned from* the sun; the south pole in the illumined half, and *turned towards* the sun. At the left and right, the relative positions of the earth and sun at the equinoxes are exhibited; the axis lying sideways towards the sun, the terminator passing through both poles, so that each pole is equally under the sun's influence. The circle below shows the earth's position on 21st June, the north pole in the sun's rays, the south pole in the shade.

CHAPTER VI.

DIVISIONS OF TIME.

THE principal divisions of time are, the DAY, the MONTH, and the YEAR.

There are three kinds of day—the SIDEREAL, the SOLAR, and the MEAN-SOLAR or COMMON DAY.

The *sidereal day* is the time which the earth takes to make one complete rotation on its axis—23 hours, 56 minutes, 4·09 seconds. It is called sidereal, from the Latin word *sidus*, a star, because it is estimated by the time which elapses from the moment of any star being on the meridian of a place till its return to that meridian. The reason for this mode of estimating the true period of the earth's rotation will be explained in the next paragraph.

The *solar day* is the time which elapses from the sun's being on the meridian of any place till he returns to that meridian. This is longer than the true time of the earth's rotation, in consequence of the earth's orbitual motion round the sun. To understand this, it will be best to suppose (what would be the same in effect) the earth rotating in one spot, and the sun moving in the same direction (west to east) round the earth in a year. One 365th of this apparent course of the sun will be performed daily. If the sun had not this apparent motion, the earth, after one complete rotation, would bring the same me-

round any body taken as the sun. The cane will represent the half of the axis, and, its constant parallelism being remembered, will at once exhibit the nature of these changes.

ridian back to the sun; but as the sun has moved through the sky while the earth was rotating, when the meridian, on which the sun was at the commencement of the rotation, has come round to be opposite the spot where the sun was, the sun has moved onwards from that spot, and that meridian does not overtake the sun till the earth has turned a little farther than one rotation: hence, the solar day is a little longer than the true time of the rotation of the earth upon its axis. As the stars are so extremely remote, that the whole diameter of the earth's orbit is a mere point in comparison with their distance, the orbitual motion of the earth can make no sensible difference between the true time of rotation and a sidereal day, which is therefore taken as the means of measuring the time occupied in that rotation.

From the unequal rate of motion of the earth in its orbit, and the inclination of the axis to the ecliptic, the solar day varies a little at different times.

The *mean solar* or *common* day, is the average of the solar days throughout the year. Clocks are adjusted to this time, so that they may give equal time throughout the year. The SUN-DIAL gives time by the solar day, or by *apparent* time—the clock by *mean* or common time. The vibration of a pendulum is employed as a regulator of time; and a pendulum of 39·13 + inches, at the latitude of London, vibrates 86,400 times in a mean solar day: these 86,400 seconds are divided into 24 periods of 3600 each, called hours; and each 3600 into 60 periods of 60 seconds each, called minutes.

The month is of three kinds: 1. The *sidereal* or *periodical* month of 27 days, 7 hours, 43 minutes—the time of one complete revolution of the moon round the earth, judged of by the stars: 2. The *synodical* or *lunar* month of 29 days, 12 hours, 44 minutes, being the time from one new moon to the next, or the time of a revolution of the moon, judged of by her position, as regards the sun: 3. The *calendar* or *common* month, January, February, etc., of 31 or 30 days, excepting February, which has 28 or 29 days. In each year there are 12 calendar or common months, and a little less than 12½ lunar months.

The YEAR is the period between two returns of the sun to the same equinox, and is therefore sometimes called the EQUINOCTIAL or TROPICAL year. Its duration is 365 days, 5 hours, 48 minutes, and 49·7 seconds.

The CALENDAR, or COMMON YEAR, contains 365 days. The odd time—5 hours, 48 minutes, etc.—would soon amount to a serious error. It is nearly a quarter of a day, and is allowed to accumulate till every *fourth year*, when it amounts to a day, and the year is increased by a day, to get rid of this time, and is called LEAP YEAR. This additional day is added in February, which has then 29 days But the excess of the equinoctial year over 365 days is not quite a quarter of a day, being about

11 minutes less: hence, one day every four years is too much to add. This error is corrected (within a very trifling amount), by rejecting the additional or intercalary day from every hundredth year, whose number is not divisible by 4. Thus every hundredth year, which leaves no remainder when divided by 400 (as 2000, 2400), and every other year which is divisible by 4 without a remainder, are leap years of 366 days each. All the others are years of 365 days.

There are also astronomical periods differing slightly from the equinoctial year, called *sidereal* and *anomalistic* years.

CHAPTER VII.

MOON'S PHASES—ECLIPSES—TIDES.

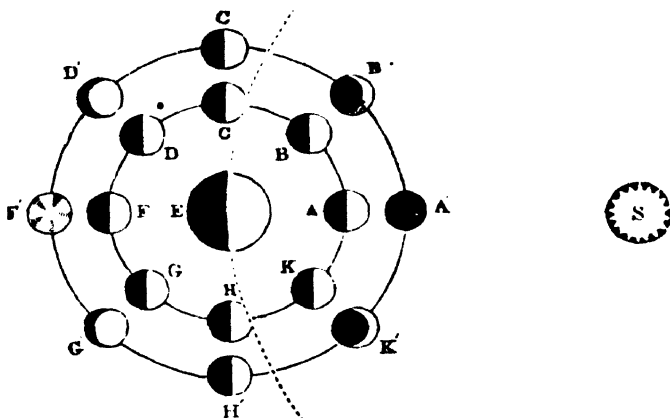
Moon's Phases.

At one time the moon appears to us as a slender crescent: this gradually increases in magnitude, till a full illumined circle is seen; which then diminishes, until the moon disappears altogether for a short time, to reappear and undergo the same changes as before. These changes in the moon's appearance are termed PHASES.

The moon in herself is a dark body, and she shines only by reflecting the sun's light; so that only one-half of the moon shines at a time—that half which is turned towards the sun. And the only visible part of the moon's surface is that part which is turned towards both earth and sun. The amount of this visible part varies according to the position of the moon in her orbit. Hence her *phases*. Mercury and Venus are found by the telescope to exhibit similar phenomena.

The following diagram illustrates the moon's motions and phases. Let S be the sun, E the earth, and A, B, C, D, F, G, H, K, in the inner circle, the moon revolving round the earth in the direction of the order of the letters just given; while the earth moves round the sun in the orbit represented by the dotted line, carrying the moon with her. The figures in the outer circle show the phases or appearances which the moon presents when in the corresponding positions in the inner circle, her orbit. At A, the sun and moon are *in conjunction* (on the same meridian), the dark side of the moon is towards the earth, and the moon is not seen at all, as represented by the black circle at A′: we have then *new moon*, or change of the moon. At C, the moon has moved through a quarter of her orbit; half of each side (dark and illumined) is turned towards the earth, and we have half moon; at F, the moon and sun are in *opposition* (opposite meridians), the illumined half is fully turned towards the earth, and there is *full moon*. Continuing her course, the amount of the illumined half turned towards the

Diag. 13.



earth gradually lessens till she arrives at A, when she disappears altogether for a short time.

The earth affords to the moon a very considerable light, and appears about thirteen times larger to the moon than the latter to us. Indeed the light which the earth gives the moon is so great as to render the dark parts of the moon just visible, by reflecting back this light, a little before and after new moon—forming the appearance popularly called "the old moon in the new moon's arms."

When viewed through the telescope, Mercury, Venus, and Mars, the planets nearest to us, exhibit phases as the moon does, and for the like reason.

Eclipses.

These are among the most striking of the celestial phenomena. At times the sun or moon is entirely, or in part, obscured by a shadow which gradually comes over its surface and then glides off. This is called an Eclipse.

An eclipse of the moon occurs when the moon, earth, and sun come to be in one straight line, with the earth between—an eclipse of the sun when they are in one straight line, with the moon between: the former happens only when the moon is in opposition, or at full moon, as at F in diagram 13; the lat-

ter, when the moon is in conjunction, as at A in that diagram, or at new moon.

If the earth, sun, and moon were always in one plane (as represented in the diagram)—that is, if the orbits of the earth and moon were in the same plane—there would be an eclipse of the earth every fortnight; of the moon, every full moon; of the sun, every new moon. But the moon's orbit is inclined to the earth's orbit at an angle of 5° 8′ +, so that she is sometimes above, sometimes below, the plane of the earth's orbit. And, therefore, eclipses take place only when there is new or full moon at the times when the moon is crossing the plane of the earth's orbit, which coincidence happens seldom. The points where the moon crosses the earth's orbit are called her *nodes*.

The Tides.

By the action of the sun and the moon, especially the latter, the waters of the large oceans of the earth are drawn in the directions of these bodies, so as to rise and fall according to their position in relation to them. These regular movements are called THE TIDES.

The movement of the waters in the tides chiefly follows the course of the moon. The lunar day, or interval from the moon being on the meridian of any place till she is again on that meridian, is 24 hours 50 minutes. Hence, the phenomena of the tides take place in this period. There are two HIGH-WATERS or FLOODS at the same time, one on the meridian next the moon, the other on the opposite meridian; and at every place there are two high tides in the lunar day, at an interval of about 12 hours 25 minutes. High water is about three hours after the moon has been on the meridian of a place. The tides are highest when the sun and moon are in conjunction or opposition—then called *spring-tides;* lowest when the moon is in her quarters—then called *neap-tides.* The tides are affected by the moon's distance, by the sun's distance and elevation, and by local causes, as explained in the section on Physical Geography.

The tide on the side of the earth next the moon is caused by the direct action of the moon, in drawing towards her the waters there. But the moon also acts on the mass of the earth, as well as on the waters under her; hence, in a manner, she gives the earth a tendency *from* the waters on the farther side of the earth, which produces a high tide on that side also.

PHYSICAL GEOGRAPHY.

GEOGRAPHY, in its literal and most comprehensive meaning—a description of the earth—consists of four parts, PHYSICAL GEOGRAPHY, ORDINARY or POLITICAL GEOGRAPHY, MATHEMATICAL GEOGRAPHY, GEOLOGY.

PHYSICAL GEOGRAPHY might, not inappropriately, be termed NATURAL GEOGRAPHY, in contradistinction to ordinary or political geography. Disregarding the artificial divisions of the land into states or countries, Physical Geography marks the broad, striking, natural features of the earth's surface; that is, the arrangement, form, and extent of land and water, of the coasts, mountain-ranges, elevated lands and plains, lakes and rivers; the great oceanic and atmospheric movements; and the distribution over the various regions of the earth's surface, of heat, moisture, magnetism, of the races of mankind, and of the natural families of the lower animals and plants.

ORDINARY or POLITICAL GEOGRAPHY describes the divisions of the land made by mankind into countries, provinces, etc.;—their inhabitants, government, towns, natural productions, agriculture, manufactures, and commerce;—every thing being viewed with reference to the artificial divisions and works made by man.

MATHEMATICAL GEOGRAPHY treats of the form and magnitude of the earth, its movements, the positions of its parts as regards the heavenly bodies, the phenomena flowing from these positions and movements, and the various imaginary lines and divisions which are made to assist in defining these relations.

GEOLOGY describes the structure of the earth, and the changes which take place on its surface and in its interior; that is, the arrangement and composition of the various rocky masses comprising the earth's crust; the remains of animals and plants which they contain; and the changes going on at the surface of the land or in the sea.

The greater portion of this volume is occupied with Ordinary or Political Geography; Mathematical Geography is treated of in the definitions and along with the Astronomy; and we now proceed to a short account of Physical Geography and Geology.

PHYSICAL GEOGRAPHY.

Extent of Land and Water on the Earth's Surface.

The area of the surface of the earth is nearly 197,000,000 square miles.* Of this, as the following table shows, the land forms a little more than *one-fourth*, the water a little less than *three-fourths*:—

Land	51,500,000	square miles.
Water	145,500,000	......
Earth's Surface	197,000,000	......

Dividing this quantity by 2, we obtain 98,500,000 as the number of square miles in a hemisphere, whether we take northern and southern hemispheres separated by the equator, or an eastern or western hemisphere divided by a meridian circle.

Considered in hemispheres, northern and southern, the proportions of land and water are nearly as follows:—

Northern Hemisphere,	Land	38,000,000	square miles.
Do. do.	Water	60,500,000	.....
Southern Hemisphere,	Land	13,500,000	......
Do. do.	Water	85,000,000	......
Earth's Surface		197,000,000	......

There is thus about three times as much land in the northern as in the southern hemisphere. Viewed in eastern and western hemispheres (20° W. long. to 160° E. long.), there are about 37 millions of square miles of land in the former, 14½ millions in the latter; being a proportion of 2½ to 1.

Considered with reference to the zones, the earth's surface may be divided as follows:†

North Frigid Zone	8,132,797	square miles; or parts	4
North Temperate Zone	51,041,592	......	26
Torrid Zone	78,314,115	......	40
South Temperate Zone	51,041,592	......	26
South Frigid Zone	8,132,797	......	4
Earth's Surface	196,662,893	......	100

The distribution of land and water in the different zones is *nearly* as follows:—The land forms about *one-third* of the north frigid zone; *one-half* of the north temperate zone;

* The surface of a sphere is found by multiplying the square of the diameter by 3·1416, or 3⅐. Thus, the surface of the earth, considered as a sphere, is equal to the number of square miles found by multiplying 7912 by itself and then by 3·1416, or 3⅐.

† Ingram's Mathematics, p. 212.

one-half of the torrid zone ; and *one-tenth* of the south temperate zone.

In these estimates, the various land-masses in the south frigid zone are omitted : their extent is unknown : that zone is reckoned as being all water.

If we suppose the world to be divided into two hemispheres by the plane of the horizon of London, the dividing line being 90° all round from London, we would find Europe, Africa, North America, all Asia, excepting the Malay Peninsula and a little of the Indo-China States, and two-thirds of South America, in the same hemisphere with London ; which is therefore nearly in the middle of the land of the world. The other hemisphere would be almost entirely water.*

Leading Natural Divisions of the Land.

The land of the world is formed into two principal masses of vast extent called Continents, and a number of lesser parts of various magnitudes, called Islands. The common distinction between islands and continents—that the former are surrounded by water, while the latter are not so—is correct only as applied to a part of a continent, not to the whole of it. In the literal sense of the definition of an island, the continents also are islands.

In saying that the land is collected chiefly in *two* principal masses, the land around the North Pole is disregarded, or supposed to be joined to America, and the land in the south frigid zone is also disregarded.

The largest of these continental masses is that which has been known to man from the earliest times. It is called the Great Continent, or Great Eastern Continent ; and is almost entirely (a very small part of the north-east of Asia only excepted) contained within the hemisphere lying east of the meridian 20° west longitude,—between that meridian and the meridian 160° E. long. This is called the eastern hemisphere.

Cape Verde, in Africa, W. long. 17° 30′, is the most westerly point of the great continent ; East Cape, in Siberia, W. long. 170° 6′, adjoining Behring Strait, is its most easterly point. It stretches north to Cape Severo, in Asia, N. lat. 78°, and south to Cape Agulhas, in Africa, S. lat. 34° 51′.

In the south-eastern part of the eastern hemisphere, divided by the tropic of Capricorn, is found the vast island of Australia, sometimes spoken of as a continent, with other large islands to the north and north-west of it.

In the eastern hemisphere the great continent contains a

* See the outline sketch of the world divided in this manner in the Physical Chart of the Globe.

little less than 33 millions, Australia 3 millions, and the other islands a little more than 1 million, of square miles.

The other continent is the Western Continent or New World: with the exception of a very small part of the east of Greenland (which may be considered a separate continent), it is contained in the other hemisphere, west of the meridian, 20° W. long. Its most westerly point is Cape Prince of Wales, in W. long. 168°, adjoining Behring Strait; its most easterly point, Cape Branco, a little north of Pernambuco, in Brazil, W. long. 34° 48′. It stretches from Bellot Strait, about N. lat. 72°, to Cape Froward on the Strait of Magellan, S. lat. 53° 53′.

The great eastern continent is naturally divided into two parts, almost entirely separated by the Mediterranean and Red Seas, being joined only by the narrow Isthmus of Suez; Africa in the south-west; Europe and Asia, forming one compact mass in the north and north-east. In like manner, the western continent is divided into two portions,—North America and South America, joined by the narrow Isthmus of Panama.

North-east of the Western Continent we find Greenland, the northern and eastern extent of which, and its connexion with America, are yet undetermined.

The islands are often found in clusters or *archipelagos;* as the great Polynesian cluster, the Sandwich Islands, the West India Islands, the Isles of Greece, the great Indian Archipelago, the Japan Islands; and several of these, as well as many of the large solitary isles, as Tierra del Fuego, Sicily, Ceylon, Tasmania, are at the extremity of some peninsula. These, with Iceland, Spitzbergen, Novaia Zemlia, Madagascar, New Zealand, are the leading groups of islands. The Atlantic Ocean has but few islands scattered through it.

The European and Asiatic part of the great continent extends from east to west, its greater axis lying parallel to the equator: Africa and America stretch from north to south.

Most part of Greenland and small parts of North America, Europe, and Asia are in the north frigid zone; the greater parts of North America, Europe, and Asia, and about one-fourth of Africa are in the north temperate zone. The greater parts of Africa and South America, nearly half of Australia, and small parts of Asia and North America, are in the torrid zone. About one-third of South America, one-half of Australia, and a small part of Africa, are in the south temperate zone.

It has been observed that the land has a great tendency to assume a peninsular form, and that by far the greater number of the peninsulas stretch out into the ocean in a southerly direction. This is seen in the western hemisphere in Greenland, in the peninsulas of Florida, California, South America; in the eastern continent, in Norway and Sweden, Italy, Greece, Arabia, India, the Malay Peninsula, Corea, Kamtchatka, and Africa. But there are a few exceptions — as Yucatan, Denmark, etc.

Resemblances have been pointed out between Asia and North America, in which India, Malacca, and the East Indian Archipelago have been compared to Mexico, Florida, and the West Indian Archipelago; and between Asia and Europe, in which Spain, Italy, Greece, and the Archipelago have been compared to Arabia, India, Malacca, and the Indian Archipelago; the Pyrenees and Alps to the Caucasus and the Himalaya; the Po to the Ganges; Genoa, Milan, and Venice to Bombay, Delhi, and Calcutta.

Considering how nearly Asia and America are joined at Behring's Straits and by the islands of the Aleutian Archipelago; the proximity of Newfoundland, Greenland, Iceland, and the British Isles; and that Borneo, Australia, and the Polynesian group of islands are like a continuation of Asia; it may be said that the great mass of the land stretches round from east to west about the region of the north temperate zone; sending out three great prolongations to the S. S. E.,—Africa, Oceania, and South America.

These interesting resemblances, with others which have been noticed, have not yet been traced to any general law.

South America, Africa, Australia, and the north of Asia present coasts very little broken or indented by bays or rivers—particularly Africa. Europe, on the other hand, is indented in many places, and deeply, by bays, gulfs, and estuaries, which penetrate far inland, extend greatly the line of coast, and prove highly favourable for commerce and navigation. The south and east of Asia and the east of North America partake of the same advantages in a somewhat less degree. The length of the European coast from the Straits of Waigatz to the Sea of Azov is about 20,000 miles.

Leading Divisions of the Water.

The great waters of the globe are not, like the masses of land, in distinct portions, each with a well-defined boundary; they are united throughout into one great mass, and the divisions which we form between them are only imaginary. This huge body of water is divided into five principal oceans, the *Atlantic*, *Pacific*, *Indian*, *Arctic*, and *Antarctic Oceans*.

The Atlantic Ocean extends from the arctic to the antarctic circle, lying to the west of the great continent. Its breadth varies from about 900 to 4000 miles, and its area is 25,000,000 square miles. It is quite open at the south where it joins the Antarctic Ocean, but is partly enclosed at the north by Labrador, Greenland, and Iceland, terminating in Davis Strait at the north-west, and at the north and north-east in comparatively narrow passages between Greenland and Iceland, and Iceland and Norway. Its leading branches are Baffin and Hudson Bays, the Gulf of St Lawrence, Bay of Fundy, Gulf of Mexico, and the Caribbean Sea on the west; on the east,

the North Sea, the Baltic Sea, the English Channel, the Bay of Biscay, the Mediterranean Sea, and the Gulf of Guinea.

The PACIFIC OCEAN extends westward from America to Asia, Sumatra, and Australia; it is open to the Antarctic Ocean at the south, but is almost entirely closed at the north by the great continents of Asia and America, which stretch out as if to join, and are only about thirty-six miles apart at the narrow passage of Behring Strait, where the Pacific and Arctic Oceans meet. This vast expanse of water is about 12,000 miles broad, and has an area of 90,000,000 square miles. Its leading branches are the Sea of Okhotsk, Japan Sea, Yellow Sea, Chinese Sea, on the west, penetrating into Asia; the Gulfs of California and Panama, in America, on the east.

The INDIAN OCEAN, between Asia and the Antarctic Ocean, Africa, and Australia, is about 4500 miles broad, and has an area of 20,000,000 square miles. It penetrates the land on the north by the Red Sea, Persian Gulf, Arabian Sea, Bay of Bengal.

The ARCTIC OCEAN lies north of the great continents, being almost enclosed by them, penetrating Europe by the White Sea and Sea of Kara, Asia by the Gulf of Obi, and a few small inlets. Large portions of this ocean are constantly blocked up by ice.

The ANTARCTIC OCEAN lies within the antarctic circle. It is open on all sides to the Atlantic, Pacific, and Indian Oceans. Portions of land have been discovered in it; but, like the Arctic Ocean, great parts of it are blocked up by ice.

MOUNTAIN-RANGES AND TABLE-LANDS.

The most prominent features of the land are the high ranges of mountains, towering to a height of many thousand feet above the neighbouring plains, while some reach an elevation of nearly 30,000 feet above the sea,—the level from which the heights are estimated.

Generally speaking, the mountain-ranges lie in the direction of the greatest lengths of the continents. One grand range, or rather series of ranges, with few deviations or interruptions, extends along the great continent, south-west by west from Behring Strait to the Bay of Biscay. The first are the ALDAN MOUNTAINS, commencing at East Cape, from which a branch shoots into Kamtchatka; these are continued in the STANNOVOI range, and the ALTAI and THIAN-SHAN Mountains, between Mongolia, Eastern Turkestan, and Asiatic Russia. Running south-west and south in the Plateau of Pamir, the grand range meets with the HIMALAYA range running east and south-east between India and Tibet—the two ranges uniting in the great HINDOO-KOOSH Mountains. The grand range then stretches west to the ELBURZ Mountains, which skirt the south of the Caspian Sea, and may be considered as continued in the ARMENIAN Mountains and TAURUS range in Turkey in

Asia, and in the great CAUCASUS range running from the Caspian to the Black Sea. The range is continued in Europe by the BALKAN Mountains and EASTERN ALPS in Turkey, and by the CARPATHIAN Mountains in Austria, and HERCYNIAN Mountains in Bohemia and Germany. All these seem to centre in the TYROLESE and SWISS ALPS, which by the CEVENNES, in the south-east of France, pass into the great range of the PYRENEES and the CANTABRIAN Mountains, terminating at Cape Finisterre, nearly the most westerly point of continental Europe. Such is the mighty mountain-range which sweeps from east to west across Asia and Europe.

The leading mountain-ranges not strictly belonging to this great ridge from East Cape to Cape Finisterre, are the IN-SHAN Mountains, north of China, the PE-LING, NAN-LING, and YUNG-LING Mountains, in China; the HIMALAYA, the WESTERN GHAUTS, and NEILGHERRIES running along the west coast of India, the great URAL range, running south between Europe and Asia, the DOFRINE and KOLEN Mountains in the Scandinavian peninsula, and the APPENINE range in Italy. But the In-Shan, Pe-ling, Nan-ling, Yung-ling, and Apennine Mountains, may almost be considered as spurs or branches of the great leading range.

Comparatively little is certainly known of the interior of Africa, but its chief mountain-ranges seem to lie round the coast. In the north are the ATLAS Mountains; in the east the Mountains of ABYSSINIA; running south from the latter is the EAST COAST RANGE, which, in the neighbourhood of the equator, rises, in two summits, to the height of 20,000 feet. The WEST COAST RANGE, in Upper Guinea, is known as the KONG Mountains; and in Cape Colony are the NIEUWVELD Mountains.

The leading feature of the mountain-system of the American continent is a vast range near or close to the west coast, extending from the Mackenzie River in the north to the Straits of Magellan. This range is some distance inland in North America, where it receives the successive names of ROCKY Mountains, SIERRA MADRE, and Mountains of MEXICO, but approaches the sea in Central America, and is continued, near the coast in South America, in several ridges, under the name of the ANDES, or CORDILLERAS of the ANDES.

Besides these, there are, in North America, the CASCADE Mountains, and the SIERRA NEVADA range, which run along the coast of the Pacific, the APPALACHIAN or ALLEGHANY range, running north-east through the United States, and broken ranges from the north of the Alleghany Mountains to the north of the Rocky Mountains, on the line of the great lakes. In South America, a great ridge stretches west from the mouth of the Amazon, and another range extends south-west near the east coast of Brazil, with several irregular ridges in the interior.

TABLE-LANDS.

Few mountains rise abruptly from the plains beneath, most of them slope gradually upwards, and they often form level or gently inclined plains of considerable extent, at a high elevation, called TABLE-LANDS OR PLATEAUS. The following are the most extensive table-lands on the globe:—

CENTRAL ASIA, between the Altai and Himalaya mountains, from 2000 to 4000 feet above the level of the sea in the north, and 4000 feet towards the middle, at the eastern part of which is the great desert of Gobi. The plateau of THIBET, north of the Himalayas, has an elevation of 15,000 or 16,000 feet.

AFGHANISTAN and PERSIA, known as the Plateau of Iran, an extensive high land, about 7000 feet in elevation, at the east of the former, sinking to about 4000 feet in Persia.

The DECCAN, or interior of India, about 3000 feet high.

ARMENIA, at the north-east of Turkey in Asia, about 6000 feet.

The interior of Asia Minor, and of Arabia, particularly at the west, presents table-lands of considerable elevation.

A large part of the SPANISH PENINSULA is elevated to a height of from 2000 to 3000 feet.

BAVARIA is mostly a table-land 2000 feet above the level of the sea. And in the south of Norway there is a table-land nearly 4000 feet in elevation.

The interior of Africa is of no great elevation. The highlands are round the margin of the continent. The interior of southern Africa has a general elevation of about 3000 feet: north of the equator the average height above the sea-level is from 1000 to 1500 feet.

The table-lands in North America are, the country along the EASTERN BASE of the ROCKY MOUNTAINS, from 2000 to 3000 feet in height; the table-lands of UTAH and MEXICO, the latter attaining an elevation of 9000 feet near the city of Mexico; and a less elevated PLATEAU in CENTRAL AMERICA, from 4000 to 6000 feet.

In South America there are three leading table-lands of vast height and extent, lying between the lofty ridges of the Andes; the TABLE-LAND of QUITO, on the equator, about 9000 feet high; the TABLE-LAND of PASCO in Peru, 14,000 feet, extending from 10° to 12° south latitude; and the vast plateau of TITICACA or POTOSI, extending from 14° to 21° south, containing the great lake of Titicaca, and elevated nearly 13,000 feet above the sea.

VOLCANOES.

Evidences of igneous action, in remote or recent times, are found almost everywhere; as, for example, in the country around Edinburgh, and Auvergne in the centre of France. The chief sites of existing volcanic action are, Kamtschatka, the Kurile Isles, Japan and the islands south of it; Sumatra, Java, and the Sunda islands; Iceland, Hecla, Vesuvius, Etna, the Lipari

Isles, and Stromboli; the Peak of Teneriffe, the West India Islands, Mexico, Central America, the Andes in South America, and the Sandwich Islands. Volcanoes emit vast volumes of steam, ashes (which are often carried in showers to great distances), melted rock or lava, and mud.

PLAINS OR LOWLANDS, AND DESERTS.

In ASIA the district between the Altai Mountains and the Arctic Ocean is a vast plain; so are the north-east of China west of the Yellow Sea; India, in the north-east, between the Deccan and the Himalaya Mountains; around the Sea of Aral in Asiatic Russia, and the south-east of Turkey in Asia. Several of the lowlands in the south-east of Russia, and neighbouring districts of Turkestan, are called *steppes*.

The principal plains in Europe are:—1. That vast district extending from the north of France east through Belgium, Holland, the north of Germany, and Prussia, and over the whole of Russia, which, except in the VALDAI HILLS, in the centre, and the north-west where it joins the Scandinavian peninsula, is almost one level. 2. The plain of Hungary, watered by the Theiss and Danube.

The chief lowland plains in Africa are Lower Egypt, and Soudan, where watered by the Niger and Lake Chad.

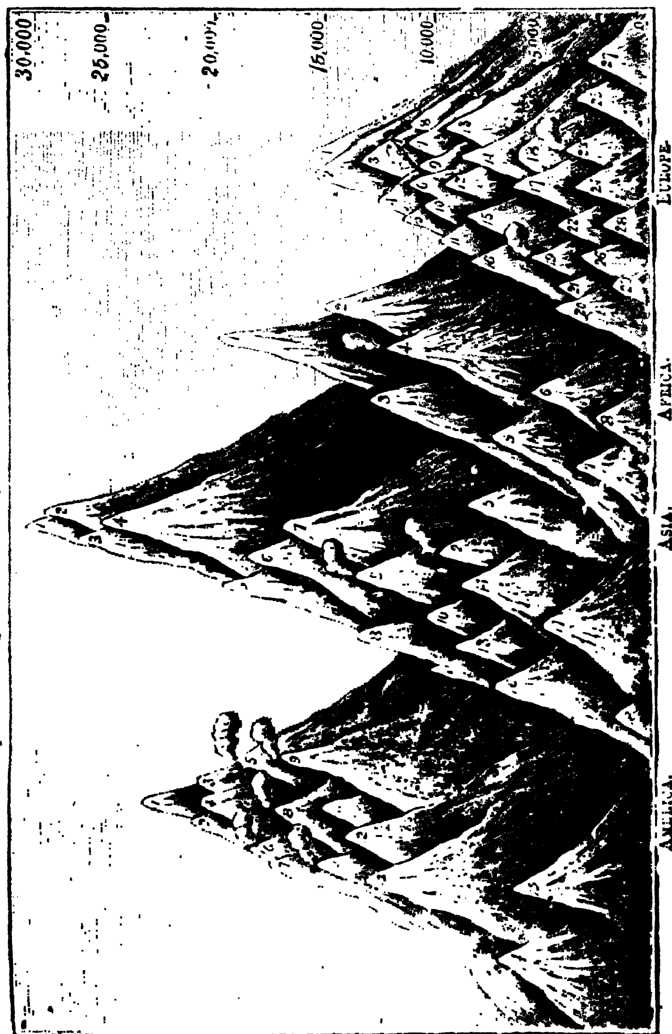
The interior of North America, between the Rocky and the Alleghany Mountains, is one vast plain, watered at the lower part by the Mississippi and its tributaries. The great grassy plains in this region are called PRAIRIES.

The interior of South America is also for the most part a plain of little elevation; naturally divided into three great sections, the plains of the Orinoco, of the Amazon, and of the La Plata. The plains of the Orinoco are termed LLANOS, those of the Amazon, SELVAS, and those of La Plata, PAMPAS.

The principal *deserts*, or sandy and barren districts, are the desert of Gobi in Central Asia; the great salt-desert in Persia; the deserts of Syria, and the interior and north-west of Arabia; the Sahăra or Great Desert in the North of Africa; the Libyan Desert, west of the Upper Nile; the Deserts of Nubia, between the Upper Nile and the Red Sea; parts of the interior of Australia; extensive tracts of Patagonia in South America; and some districts in the other parts of South America and in North America, particularly at the western part of the great North American plain, in the basin of the river Platte, east of the Rocky Mountains. These deserts, particularly in Arabia, are often vast trackless plains, composed of burning sand, without water, vegetation, or shelter from the fierce rays of a tropical sun. The sand is raised in clouds which blind and often have overwhelmed travellers. Occasionally green spots are met with around a spring, which give relief to the parched and exhausted wanderer. These are called OASES.

The following wood-cut and table represent the heights of

the most elevated mountains in the eastern and western hemispheres :—



Comparative Heights of the Principal Mountains on the Globe.

EASTERN HEMISPHERE.—EUROPE.

The Mountains marked * are Volcanoes.

	Mountain.	Situation.	Country.	Feet above the Sea.
1.	Mount Blanc	Alps	Savoy	15,784
2.	Mount Rosa	Alps	Switzerland	15,217
3.	Shreckhorn	Alps	Switzerland	13,492
4.	Ortler Spitz	Alps	Tyrol	12,852
5.	Mulhacen	Sierra Nevada	Spain	11,678
6.	Simplon	Alps	Switzerland	11,542
7.	Maladetta	Pyrenees	Spain	11,436
8.	Mount Perdu	Pyrenees	France	11,170
9.	*Etna		Sicily	10,874
10.	St Gothard	Alps	Switzerland	10,595
11.	Ruska	Carpathians	Hungary	9,912
12.	Olympus		Turkey	9,754
13.	Mount Corno	Apennines	Italy	9,521
14.	Lomnitz	Carpathians	Hungary	8,675
15.	Sneehatten	Dofrines	Norway	8,120
16.	Parnassus		Greece	8,068
17.	Mount Doré	Auvergne	France	6,221
18.	Mezin	Cevennes	France	5,820
19.	*Hecla		Iceland	5,210
20.	Ben Nevis		Scotland	4,406
21.	Ben Macdhui	Grampians	Scotland	4,296
22.	Cairngorm	Grampians	Scotland	4,095
23.	*Vesuvius		Naples	3,932
24.	Snowdon		Wales	3,590
25.	Magillicuddy's Reeks		Ireland	3,414
26.	Scawfell		England	3,229
27.	Helvellyn		England	3,055
28.	Skiddaw		England	3,022
29.	Cader Idris		Wales	2,914

ASIA.

	Mountain.	Situation.	Country.	Feet above the Sea.
1.	Mount Everest, or Gaurisankar	Himalaya	N. of India	29,002
2.	Kunchin-gunga	Himalaya	N. of India	28,177
3.	Dhawalagiri	Himalaya	N. of India	28,086
4.	Javahir	Himalaya	N. of India	25,749
5.	Highest Peak of Hindoo-Koosh		N. of Cabul	20,000
6.	Elburz	Caucasus	Circassia	18,500
7.	Ararat		Armenia	17,112
8.	Ophir		Sumatra	13,842
9.	*Mowna Loa		Sandwich Islands	13,950
10.	Bieluka	Altai	Siberia	12,796
11.	Highest Peak of Lebanon		Palestine	10,000
12.	*Awatsha		Kamtchatka	9,600
13.	Sinai		Arabia	9,300
14.	Olympus		Asia Minor	9,000
15.	Highest Peak of Neilgherries		India	8,960
16.	Adam's Peak		Ceylon	7,402
17.	Ida		Asia Minor	5,290
18.	Carmel		Palestine	1,700

AFRICA.

	Mountain	Situation	Country	Feet above the Sea.
1.	Kilimanjaro		Zanguebar	20,065
2.	Kenia		Zanguebar	18,000
3.	Highest Peak of the Cameroons		W. Africa	13,129
4.	*Peak of Teneriffe		Canaries	12,198
5.	Compass	Snowy Mountains	S. Africa	8,500
6.	Pico Ruivo		Madeira	5,993
7.	Table Mountain		Cape Colony	3,582
8.	Diana's Peak		St Helena	2,693

Ascent of Green and Rush in the Nassau balloon, 1838	27,000
Greatest height attained on the Himalaya by Graham and two Swiss mountaineers in 1883	23,700
Height of Snow-line on the N. side of the Himalaya	17,000
Mansarowara Lake, in Tibet	14,500
Height of Snow-line on the Alps	8,900
Convent of the Great St Bernard, Alps	8,180
Pass of the Little St Bernard, Alps	7,192

WESTERN HEMISPHERE.—AMERICA.

	Mountain.	Situation.	Country.	
1.	Aconcagua	Andes	Chili	23,910
2.	Sorata	Andes	Bolivia	21,286
3.	Illimani	Andes	Bolivia	21,145
4.	Chimborazo	Andes	Ecuador	20,517
5.	*Cotopaxi	Andes	Ecuador	19,550
6.	*Antisana	Andes	Ecuador	19,305
7.	Mount St Elias		N. America	17,900
8.	*Popocatepetl		Mexico	17,720
9.	*Orizaba		Mexico	17,347
10.	*Pichincha	Andes	Ecuador	15,918
11.	Mount Brown	Rocky Mountains	N. America	15,900
12.	Mount Fairweather		N. America	14,750
13.	Coffre de Perote		Mexico	13,413
14.	Highest Peak of Blue Mountains		Jamaica	7,278
15.	Mount Washington	Alleghanies	United States	6,652

Greatest altitude attained by Humboldt and Bonpland on Chimborazo, in 1802	19,798
Whymper and two Italian mountaineers ascended to the top of Cotopaxi, in 1880	19,550
Heights of Assuay, the ancient Peruvian Road, Ecuador	15,540
City of Pasco, Peru	13,720
City of Potosi, Bolivia	13,330
Lake Titicaca, Bolivia	12,795
City of Quito, Ecuador	9,543
City of Mexico	7,471

Rivers and Lakes.

Next to seas, plains, and mountains, the most striking features of the land are the waters running through it, or Rivers. These rise in the most elevated districts, and flow thence in various directions towards the sea. The high land or ridge between the sources of the rivers, which flow in opposite directions through a country, is called the *water-shed;* the tract of country which sends its waters into any river is called the *basin* of that river.

Rivers play an important part in the grand natural circulation of water, constantly going on through air, earth, and ocean. They are formed from the water which has descended in *rain*, or has been deposited as *dew*, or from the melting of *hail*, *snow*, *hoar-frost*, and *ice*. This water flows along the surface, making *streams* or *rivulets*, which unite and form *rivers;* or it sinks into the ground, when it is absorbed, or penetrates and issues at other parts in springs.

The course of a river necessarily depends on the form of the country through which it flows. Turning in whatever direction its course is favoured by the sinking of the level of the land, it often takes a very circuitous route to the sea. In time it wears away the ground beneath it, and cuts for itself a *channel* or bed, the sides of which are called its *banks*.

Rivers generally run at right angles to the mountain-chains, from whose upper ridges they flow; and from the arrangement of the leading mountain-chains, the greater number of large rivers flow from west to east towards the ocean; some to north or south; few towards the west. They are not navigable if they slope more than one foot in 1000; a greater slope gives rise to rapids. Rivers by the wearing away of their beds carry down with them a large quantity of solid matter in suspension. This is in part deposited when their velocity becomes small; when they overflow their banks; and in large beds of a somewhat triangular form at their mouths, called *deltas*. Most great rivers discharge their waters into the sea by several mouths, as the Ganges, the Volga, the Rhine, the Nile, the Orinoco.

Many rivers periodically overflow their banks, as the Ganges, the Indus, the Nile, the Niger, the Zaire or Congo, the Zambezi, the Mississippi. This phenomenon occurs chiefly in the torrid zone, and is caused by the heavy rains which fall there in the wet season; or by the melting of snows on the mountains. The latter cause, operating suddenly, often gives rise to floods in other districts. The rivers in northern Asia are frequently flooded, from their lower portions near the Arctic Ocean being still bound up in ice, while their sources are opened up and replenished by the influence of summer. In several

rivers, whose channels are entered by the tide, a remarkable phenomenon is witnessed at high-tide—a wave, often many feet in height ascending the stream in opposition to the descending current. This is called the *bore;* and is of remarkable height and velocity at the mouths of the Hoogly (a branch of the Ganges) and of the Amazon.

The following table exhibits the situations, terminations, and lengths of the leading rivers of the world:—

EUROPE.

Name.	Country.	Termination.	Length in miles
Volga	Russia	Caspian Sea	2200
Danube	Germany, etc.	Black Sea	1725
Dnieper	Russia	Black Sea	1260
Don	Russia	Sea of Azov	1100
Rhine	Switzerland, Germany, and Holland	North Sea	800
Dwina	Russia	White Sea	760
Dniester	Russia	Black Sea	700
Elbe	Germany	North Sea	690
Vistula	Poland, etc.	Baltic Sea	628
Loire	France	Bay of Biscay	570
Oder	Prussia	Baltic Sea	550
Tagus	Spain and Portugal	Atlantic Ocean	540
Rhone	Switzerland and France	MediterraneanSea	490
Douro	Spain, etc	Atlantic Ocean	460
Guadiana	Spain	Gulf of Cadiz	450
Po	Italy	Adriatic Sea	450
Seine	France	English Channel	430
Ebro	Spain	MediterraneanSea	420
Garonne	France	Bay of Biscay	350
Guadalquivir	Spain	Gulf of Cadiz	290
Severn	England	Bristol Channel	240
Shannon	Ireland	Atlantic Ocean	224
Tiber	Italy	MediterraneanSea	215
Thames	England	North Sea	215
Trent	England	North Sea	180
Tay	Scotland	North Sea	120
Forth	Scotland	North Sea	115
Clyde	Scotland	Frith of Clyde	100

ASIA.

Yang-tse-kiang	China	Pacific Ocean	3200
Yenisei	Siberia	Arctic Ocean	2900
Amoor or Saghalien	Mongolia, etc	Gulf of Tartary	2640
Hoang-ho	China	Yellow Sea	2600
Obi and Irtish	Siberia	Arctic Ocean	2500
Lena	Siberia	Arctic Ocean	2400
Euphrates	Turkey in Asia	Persian Gulf	1800
Indus or Sind	India	Indian Ocean	1800
Menam-kong or Mekong	Siam, etc.,	Chinese Sea	1700

Name.	Country.	Termination.	Length in miles.
Ganges	India	Bay of Bengal	1500
Brahmapootra	Tibet, etc	Bay of Bengal	1500
Oxus or Amoo Daria	Turkestan	Sea of Aral	1300
Jaxartes or Sir Daria	Turkestan	Sea of Aral	1200
Irrawady	Burma	Bay of Bengal	1200
Choo-kiang	China	Chinese Sea	1050
Ural	Russia	Caspian Sea	1020
Tigris	Turkey in Asia	Euphrates	800
Menam	Siam	Gulf of Siam	800
Godavery	India	Bay of Bengal	800

AFRICA.

Name.	Country.	Termination.	Length in miles.
Nile	Nubia, Egypt, etc.	Mediterranean Sea	3000
Niger or Quorra	Nigritia	Gulf of Guinea	2300
Congo or Livingstone	Central Africa	Atlantic Ocean	2000
Zambezi	Central Africa	Indian Ocean	1800
Orange or Gariep	South Africa	Atlantic Ocean	1000
Senegal	Senegambia	Atlantic Ocean	900
Gambia	Senegambia	Atlantic Ocean	650

AMERICA.

Name.	Country.	Termination.	Length in miles.
Amazon or Maranon	Brazil	Atlantic Ocean	4400
Mississippi	United States	Gulf of Mexico	3160
From source of the Missouri			4265
La Plata and Parana	Argentine Republic	Atlantic Ocean	2350
St Lawrence (including the Lakes)	Dominion of Canada	G. of St Lawrence	2000
Arkansas	United States	Mississippi	2000
Madeira	Peru and Brazil	Amazon	1800
Mackenzie	Dominion of Canada	Arctic Ocean	1600
Para and Tocantins	Brazil	Atlantic Ocean	1500
Red River	United States	Mississippi	1500
San Francisco	Brazil	Atlantic Ocean	1500
Orinoco	Venezuela.	Atlantic Ocean	1480
Rio Grande del Norte	Mexico	Gulf of Mexico	1400
Saskatchewan	Dominion of Canada	Hudson Bay	1400
Paraguay	Brazil, etc	Parana	1200
Ohio	United States	Mississippi	1033
Rio Negro	Brazil	Amazon	1000
Columbia or Oregon	United States	Pacific Ocean	1000
Magdalena	New Granada	Caribbean Sea	860
Rio Colorado	Argentine Republic	Atlantic Ocean	850
Ottawa	Dominion of Canada	St Lawrence	800
Rio Colorado	Mexico, etc	Gulf of California	700
Susquehannah	United States	Chesapeake Bay	500
Essequibo	Guiana	Atlantic Ocean	450
Hudson	United States	Atlantic Ocean	325
Delaware	United States	Delaware Bay	300

It has been computed that the Volga drains an area of about 520,000 square miles;—the Danube, 310,000—Dnieper, 200,000—Don, 205,000—Obi, 1,300,000—Yenesei, 1,110,000—

Lena, 960,000—Yang-tse-kiang, 760,000—Hoang-ho, 400,000—Ganges, 420,000—Indus, 400,000—Euphrates and Tigris, 230,000—Congo or Livingstone, 860,000—Nile and Niger, above 500,000 each—Mississippi, 1,368,000—Amazon, 2,400,000—La Plata, 1,240,000—St Lawrence, 600,000,—Orinoco, 385,000.

LAKES.

Inland bodies of water—entirely surrounded by land, are called *lakes*—sometimes, when they obtain a very great magnitude *seas*. Some lakes have no river running either into them or out of them; these are conjectured to be craters of ancient volcanoes. Some send out a stream but receive none,—being fed by springs. Some receive rivers but send none out; as the Caspian Sea, the Sea of Aral, the Dead Sea, Lake Chad in Africa. These are usually more or less salt. By far the greater number both receive rivers and have rivers flowing from them, as the great lakes in North America, and Lake Baikal in Northern Asia.

The following are the principal inland waters or lakes, with their areas in square miles:—

EUROPE.—Onega, 3280; Ladoga, 6330; Wetter, 840; Wener, 2136; Garda, 183; Como, 66; Maggiore, 152; Constance or Boden See, 228; Zurich, 76; Lucerne, 99; Neuchatel, 115; Geneva, 240; Windermere, 10; Tay, 15; Lomond, 43; Neagh, 156.

ASIA.—Baikal, 15,000; Balkash, salt, 7000; Sea of Aral, salt, 26,000; Caspian Sea, salt, 140,000; Urumiah in Persia, salt, 1800; Dead Sea, salt, 360; Sea of Galilee, 76. The Caspian Sea is 83½ feet, the Sea of Galilee 329 feet, the Dead Sea 1292 feet below the level of the sea. The Dead Sea contains about 1-4th of its weight of saline matters.

AFRICA.—Victoria-Nyanza, 36,000; Albert Nyanza, 30,000; Tanganyika, 30,000; Nyassa and Shirwa, in the valley of the Zambezi; Ngami, Bangweolo, Tchad, Dembea, etc.

NORTH AMERICA.—Nicaragua, 3260; Chapala, 650; Champlain, 500; Ontario, 12,600; Erie, 11,000; Huron, 16,500; Michigan, 13,500; Superior, 43,000; Winnipeg, 9000; Athabasca, 3000; Great Slave Lake, 12,000; Great Bear Lake, 8000.

SOUTH AMERICA.—Maracaybo, 5000; Titicaca, 3800.

THE OCEAN.

That vast body of water which encircles the globe, when viewed as one grand mass, is called THE OCEAN. We have already stated its area or superficial extent, its leading divisions, and the principal branches by which it penetrates the great continents. We have now to describe briefly its composition, depth, movements, temperature, etc.

It is well known that the water of the ocean is *salt;* but the degree of saltness is different at different places. Near

the coasts where the rivers and springs are pouring vast masses of fresh water into the sea, and in the polar regions from the great amount of melted snow and ice, its saltness is less marked than far from land. The water of the Atlantic Ocean contains about 1-25th of its weight of saline matters. Of these saline matters, about two-thirds are *chloride of sodium* (common salt or muriate of soda), and the other third consists of other salts of soda, lime, and magnesia. Sea-water also contains small quantities of the remarkable elements, *Iodine* and *Bromine*. Its specific gravity is 1·027, that of distilled water being 1·000; and it freezes at about 28° Fahrenheit, 4 degrees below the temperature at which common fresh water freezes. Common salt is readily obtained from sea-water by evaporation—in pans by artificial heat—or in shallow pools by the action of the sun's heat.

The ocean varies in depth, as the land does in height. The deepest part of the Atlantic lies between St Thomas Island and the Bermudas, where the *Challenger* found a depth of 3875 fathoms. In the Pacific, between the Caroline and Ladrone islands, a depth of 4575 fathoms has been found. As might be expected, the water is shallow a considerable way out to sea where the adjoining land is low: there are often vast depths close to high mountains or precipices.

The temperature of the ocean is much more uniform than that of the air. At the depth of about 300 feet it is supposed that the influence of changes in the seasons ceases. Fresh water attains its greatest density about 39° Fahrenheit, and freezes at 32°. Salt water, on the other hand, increases in density down to its freezing point, which is 28·5° Fahrenheit. It was at one time supposed that, below a certain depth, the temperature of the ocean was in all latitudes constant, and about 39·5° Fahrenheit. The researches carried on by the *Lightning* in 1868 proved that this is not the case. In some parts the temperature was found as low as 32° while the surface temperature was twenty degrees higher. Indeed the sea seems to be warm or cold, at all depths, according to the source from which the particular layer or current of water is derived. The surface-water has a temperature of about 75° at the tropics; about 50° at latitude 60° N., when the sea is free from icebergs; and about 32° degrees or lower in the Arctic Ocean, even in summer.

Movements of the Ocean.—The waters of the ocean present three great varieties of movement—Tidal Waves, Wind Waves, and Currents, differing in their sources and general characters, but mixing with and modifying each other.

The action of the moon, strengthened by the sun at new and full moon—lessened by his influence about the first and third quarters—raises the water of the ocean into a great *tidal wave*, which follows the course of the moon over the various meridians. There are two such waves every where

daily, one on the meridian next the moon (or upper meridian), caused by the direct action of the moon on the waters there; the other on the opposite or lower meridian, caused by the action of the moon on the mass of the earth, which has the effect of raising the water on the side *farthest* from the moon. The great Atlantic tidal wave moves north, and strikes upon the shores of Europe and America. In the British Isles, it first reaches the west coasts of England and Ireland, then passes round the north of Scotland, through the North Sea, and thus reaches the mouth of the Thames, which is also reached by a smaller branch of the tidal wave through the English Channel. In the centres of the great oceans, the tides are not high but move with great rapidity; they are raised to a great height, however, in various places from local causes, as near Bristol, where they rise nearly 40 feet; and in the Bay of Fundy, in Nova Scotia, where they rise 60 feet. In the open sea the tidal wave is merely a *wave*, that is, a rising of the water, which sinks again and remains in the same place; but near the coasts there is a real advance or receding of the waters, as the tidal wave rises or sinks.

The action of the moon raises tides only in the great oceans—not in small seas and lakes; and tides are found only in those lesser seas or inlets which are in a position to be easily affected by the great ocean tidal wave. Hence, the Baltic Sea and the Mediterranean have no perceptible tides; while Hudson Bay, in the direction of the tidal current, has distinct tides.

The action of the wind is another great cause of movements in the waters of the globe; producing waves of various heights from a ripple of a few inches or less to 40 feet,—a height said to be observed near the Cape of Good Hope. Besides the agitation of the surface water by the wind blowing over it, the sea is often affected, to a considerable distance from the seat of the storm, by a lower movement called a *ground swell*. This sometimes indicates a tempest past, sometimes one approaching.

Grand movements of the waters of the ocean, as regular as the tides, but having every where a real onward movement of the mass, are continually going on. These are called *currents*. The greatest and most constant are produced by the action of the sun's heat, in evaporating and raising the temperature of the water of the torrid zone; while that of the polar regions is dense from the low temperature. Great polar currents set in towards the torrid zone; as is manifest in both hemispheres, from the course of the icebergs which have been found near the Azores and the Cape of Good Hope. In the torrid zone these currents, by the more rapid rotatory motion, aided by the action of the trade-winds, are turned into a general movement of the equatorial waters from east to west.

More limited or temporary currents are also produced by the tides, long-continued winds, melting ice, etc.

A great oceanic current seems to commence in the Antarctic Ocean, flows north-east, and, bending to the west near the tropic of Capricorn, joins the great western EQUATORIAL current in the Pacific Ocean. This current is continued in the Indian Ocean, bends south-west on both sides of Madagascar, doubles the Cape of Good Hope, nearly follows the African coast to the Gulf of Guinea, and thence forms a great Atlantic western current, dividing into a north and south branch, the latter of which again divides into one light current along the South American coast, while another returns towards the Cape of Good Hope. The main branch of the great Atlantic current, which divides near Cape St Roque in Brazil, flows north-west in the direction of the American coast, through the Caribbean Sea, round the Gulf of Mexico. There its temperature is about 88° Fahrenheit. It then passes through the Straits of Florida towards Newfoundland, taking now the name of the GULF-STREAM. North of the Bermudas, it begins to bend eastward towards the Azores, sending a branch towards the north-west of Europe, the main branch rejoining the great Atlantic current near the Gulf of Guinea. The great Gulf Stream is of a high temperature, and moves with a speed of about 80 miles a-day at the quickest, off the coast of North America. The high temperature of the Gulf Strean gives rise to the fogs of Newfoundland, from its meeting there with the great polar currents; and contributes to the mildness of the climate of Ireland and the west of Britain. (See the Physical Chart of the Globe, fronting page 430.)

These are the greater currents, but there are many lesser streams in the ocean, such as that into the Red Sea from October to May, and out of it the other half of the year; the reverse in the Persian Gulf; the currents caused by the monsoons in the Indian Ocean and Chinese Sea; and remarkable currents, of a velocity of 15 miles an hour amongst the Orkney and Shetland islands, caused chiefly by the tides, and the peculiar form of the coasts.

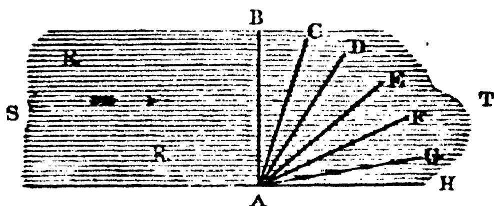
CLIMATE AND SEASONS.

The climate of a place means "the prevailing character of the weather at that place."

The main causes of differences of climate are, the amount of solar heat, elevation, position as to large masses of land or water, aspect, direction and position of mountain-ranges, direction of the prevailing winds, composition and state of cultivation of the soil.

1. *Solar Heat.*—The amount of solar heat received at any place is in proportion to the NUMBER OF THE SUN'S RAYS WHICH FALL UPON IT. This again depends upon the *direction in which*

they fall; and THE TIME OF THE SUN'S CONTINUANCE ABOVE THE HORIZON. Any surface receives more rays, the more perpendicularly they strike upon it, and fewer in proportion as they fall more obliquely. If, in the subjoined diagram, R and R be rays proceeding from S towards T, falling upon the equal surfaces, A B, A C, A D, etc., all differently inclined to the rays,



it is manifest that the greatest number fall upon A B, on which they fall perpendicularly, next on A C, then on A D, and fewest on A G, while at A H they just skirt the surface. At A G it is seen that few rays strike, and that they are distant from each other.

It is manifest that the heat at any place will be greater, the longer the sun remains above the horizon. The long day is a chief cause of the heat of summer in high latitudes.

As the sun oscillates between the tropics, always vertical at some parallel in the torrid zone, his rays fall perpendicularly only within the tropics, and less so as the place is farther north or south of the torrid zone. More rays are received in the torrid zone than in an equal space north or south, and the temperature there is always high; and as the number of rays received diminishes towards either pole, so does the temperature.

This is the *principal* cause of the temperature of a place; and we may therefore say, *generally*, that the climate of a place is warmer the nearer it is to the equator, or, that its temperature diminishes in proportion as its latitude is greater.*

2. *Elevation* is the next great cause of differences in climate. The temperature of a place depends mainly on that of the air, which absorbs the solar heat from the earth's surface. Now, the higher the place is above the level of the sea, the more rare the air is; and rare air requires more heat to warm it than dense air; the rarer it is, it requires the more. Hence, everywhere, the temperature is lower, the greater the elevation,—about one degree of Fahrenheit, in this country, for every 300 feet. This is strikingly illustrated even in the torrid zone, where the lofty mountain-ranges are covered with perpetual snow at their summits; while every variety of climate is exhib-

* Correctly, in proportion to the square of the cosine of the latitude.

ited on the same mountain as you ascend. Thus, the temperature diminishes in two directions—from the equator towards either pole—and from the low grounds to the elevated regions—burning heat prevailing at the base of a high mountain in warm countries, as Etna or the Peak of Teneriffe, while the summit is crowned with masses of snow and ice.

The following table shows the height of the line of perpetual congelation at different places:—

		Feet above the Sea.
EUROPE.		
Iceland,	65° N.	3,100
Alps,	45°, 46°	8,900
Pyrenees,	43°	9,000
Sicily (Mount Etna),	37½°	9,500
Spain (Granada),	37°	11,200
ASIA.		
Altai Mountains,	49° to 51° N.	7,000
Himalaya, North side	30° to 31°	16,600
Himalaya, South side	30° to 31°	13,000
AMERICA.		
Rocky Mountains,	43° N.	12,500
Mexico,	19°	14,800
Andes (near Quito),	1½° S.	15,800
Andes (West Bolivian),	18°	18,500

The snow-line is not highest at the equator, as might have been supposed; it is higher near the tropics. This is owing to the greater length of the day as the latitude increases, by which the sun's summer action on the snow is considerably increased.

The line of perpetual snow is above the summit of the highest mountains in the British Isles.

The decrease of temperature with the elevation above the level of the sea is of great benefit to the inhabitants of the torrid zone. The cities of Mexico and Quito enjoy a delightful climate, and the table-lands of the Andes, the Deccan, the Punjab, and many other districts in countries near the equator, owe their temperate and salubrious climates to their elevation above the sea-level.

3. *Position in respect to large tracts of land or water* has a most important influence on climate. Water moderates temperature; and hence, places which are near large bodies of water are neither so cold in winter nor so hot in summer as places in the interior of continents far removed from this moderating influence.

Land quickly absorbs heat which falls upon it, but transmits it very slowly through its substance (*i. e.* is a slow conductor of heat): hence, the solar heat which strikes upon the land ac-

cumulates at the surface, which becomes highly heated under a vertical or nearly vertical sun. Again, in winter, the surface of the land throws out its heat readily by radiation; and as, owing to its low conducting power, little fresh heat is supplied from the interior, it becomes speedily reduced to a low temperature.

When heat is imparted to water however, part is evaporated, which, ascending and being diffused abroad, carries from the surface a large portion of the heat which strikes upon it—the great process of evaporation thus tempering the effect of heat greatly wherever there are considerable bodies of water. In winter, the fluidity of water induces another process which prevents the temperature of the surface sinking very low. The surface water, on being cooled, contracts and becomes specifically heavier. It therefore descends, while warmer water from below takes its place. This goes on till the whole mass reaches the temperature of 28° Fahrenheit; so that till that time the whole body of water is a magazine of heat which, in proportion to its depth, retards the cooling of the surface water. This great natural operation must, it is evident, temper greatly the cold of winter wherever the land is near considerable bodies of water.

These principles are well illustrated in the climates of the British Isles, the various parts of Europe, the Atlantic Ocean, and North America. In winter, the north of the Atlantic Ocean has a much milder temperature than inland parts of the great continents on the same parallel: and, in like manner, the British Isles which adjoin the Atlantic, and are surrounded by its branches, enjoy a warmer climate in winter than inland places further south, and a milder temperature in summer than inland places further north. Edinburgh and Moscow are nearly on the same parallel, 55° north latitude: yet the mean winter temperature of the former is 38·5°, of the latter 15°. The mean summer temperature of Edinburgh is 57·1°, of Moscow 64°. Again, London has a mean winter temperature (39·5°), nearly eight degrees higher than that of Vienna, three degrees further south; and the mean summer temperature of Dublin (59·5°), is two degrees lower than that of St Petersburg, upwards of six degrees farther north. The mean winter temperature of Edinburgh is half a degree higher than that of Paris.

The same causes which render the torrid zone the hottest part of the earth's surface, and make the temperature decrease towards either pole, lead to those changes in temperature, etc., at the same place at different times of the year, which are called *changes of the seasons;* for the heat at any place at any time, if the other less important causes be disregarded, depends on the height of the sun, and the length of time he continues above the horizon. The highest temperature, however, is not at midsummer, nor the lowest at 21st December, but some weeks

after these periods, when the effects of the sun's position, etc., have been accumulating for some time: when there is still in summer an excess of heat received over that lost; and *vice versa* in winter. In like manner, noon is not the warmest period of the day, nor midnight the coldest. It is hottest about two hours after noon—coldest about two hours before sunrise.

These are the main circumstances which determine the character of a climate. Among other modifying causes is, the Aspect, or slope of the country; that is, the way in which it lies towards the sun: this must have a considerable influence, as it causes his rays to fall more or less slantingly. The Direction and Height of the great mountain-ranges have also a material effect on climate, inasmuch as they afford shelter from certain winds. Thus, the extreme cold which prevails in the north of Asia is in part to be attributed to the want of shelter from the arctic winds; and the mild character of the southern side of the Alps, to the shelter these give from northern blasts. The Direction of the Prevalent Winds has an obvious and often marked influence on climate; and so have the Nature of the Soil and the State of Cultivation of the Country. Some soils retain moisture, while others give it a ready passage through them. Soils vary in their power of absorbing heat. And the state of a country as to drainage, the clearing of forests, etc., exerts in the course of time a considerable influence on its climate.

Isothermal Lines.—A general idea of the temperature prevalent in any country may be obtained from its mean annual temperature—that is, the average height of the thermometer. In general, this increases as the place is nearer to the equator; but, from the causes just mentioned, the average temperatures of places do not correspond with their latitudes. For the purpose of showing what places have the same mean annual temperature, imaginary lines are drawn through them, which are called *Isothermal* lines, or lines of equal heat. They are very far from coinciding with parallels of latitude: the line of highest temperature (about 82° to 83°) is mostly north of the equator; the temperatures are lower in the southern hemisphere than at corresponding latitudes in the northern hemisphere; and the western shores of the great continents exhibit generally higher temperatures than places on the same parallel on their eastern shores. The position of the line of greatest annual heat, to the north of the equator, is attributed to the greater quantity of land in the northern hemisphere, by which heat is more absorbed than by water. To the same cause it is owing that temperatures are generally higher, at least in the torrid and temperate zones, in the northern than in the southern hemisphere. The generally higher temperature on the western than on the eastern shores of the great continents, has been attributed to various causes, such as the greater extension of the land both in the old and in the new world towards the north-

east—the great Gulf Stream, and the prevalence of south-westerly winds.

But the isothermal lines indicate the average temperature for the whole year, and only give a general idea of the character of the climate. Two places may be on the same isotherm, yet differ greatly in temperature, both in winter and in summer—one may have an equable moderate temperature, while the other may be brought to the same mean annual temperature by an extreme summer heat, and severe cold in winter. Hence, the mean winter and mean summer temperatures require also to be known, to give a complete idea of the range of temperature. Lines have been drawn through places at equal summer heat, called *Isotherals*, and through places having the same winter temperature, called *Isochimenals*. The following table exhibits the mean summer, winter, and yearly temperatures of several places of interest. The places selected have little or no elevation above the level of the se so that this cause does not materially affect their climate.*

EUROPE.	Latitude.	Mean Winter Temperature.	Mean Summer Temperature.	Mean Annual Temperature.
Edinburgh	N. 55° 57′	38°·5	58°	47°
London	... 51 30	39·5	63	51
Dublin	... 53 23	40	60	49
Paris	... 48 50	38	64·5	51
Gibraltar	... 36 7	57	73	64
Constantinople	... 41	41	71	56
Vienna	... 48 12	32	69	51
Berlin	... 52 31	31·5	64	48
Copenhagen	... 55 41	31	62	46
St Petersburg	... 59 56	18	61	39
ASIA.				
Bagdad	... 33 19	49·6	93	73
Bombay	... 18 56	77	83	81
Calcutta	... 22 33	72	86	82
Canton	... 23 7	54	82	69
Pekin	... 39 51	28	75	53
AFRICA.				
Cairo	... 30 2	58	85	72
Cape of Good Hope	S. 34 11	58	74	66
AMERICA.				
Melville Island	N. 74 47	—28	37	1·2
Quebec	... 46 49	14	68	41
New York	... 40 42	30	71	51
New Orleans	... 29 57	55	82	69
Rio Janeiro	S. 22 54	68	79	73
Hobart Town	... 42 53	42	63	52

* The Isothere of 60° and Isochimenal of 40° are given on the Physical Chart of the Globe; and the Isothermals of 80°, 70°, 60°, 50°, 40°, 32°, 30°, 20°, 10°, 5°.

It has been observed that places on the eastern sides of the great continents differ much more in their mean summer and winter temperatures, than places on the western sides. This difference is 28° for Canton, 47° for Pekin, 54° for Quebec, 41° for New York, all on the eastern sides of the continents—while it is 20° for Edinburgh, 23·5° for London, 26° for Paris, 16° for Gibraltar.

It is also found that, generally speaking, this difference increases, the farther the place is from the equator. The temperature varies little throughout the torrid zone—there the mid-day sun is never far from the zenith, and he is always about twelve hours above, and twelve below the horizon. Wet and dry are there the chief distinctions of the seasons. As we pass from that zone towards either pole, the difference in the sun's elevation at different seasons is greater, and so is the difference in the length of the day. In the frigid regions around the pole, extreme cold prevails in winter, while, for a short period in summer, when the sun scarcely sinks below the horizon, the heat is intense. Near the equator, the difference between the mean summer and winter temperatures is only a few degrees; 2° at Singapore, 6° at Trincomalee. At Calcutta it is 14°, at Rio Janeiro 11°, Gibraltar 16°, Paris 26°, Copenhagen 31°, St Petersburg 43°, Quebec 54°, Melville Island 65°.

The Atmosphere.

The atmosphere (or region of vapours), is that thin light aërial fluid which surrounds the world on all sides. It is supposed to extend to a height of from 40 to 50 miles above the level of the sea; at least at that elevation it is so exceedingly rare that it does not sensibly reflect any portion of the sun's rays to the earth,—a fact which is ascertained by the duration of twilight. The air gradually diminishes in density the higher it is, in consequence of the diminishing pressure of the superincumbent mass.

Its pressure at the level of the sea is 14·7 pounds avoirdupois on every square inch, being equal to a column of mercury 29·8 inches high. Its pressure diminishes in geometrical ratio as the height increases in arithmetical ratio. At 3·4 miles, it is reduced to one-half, or to about 15 in. mercury; at 2 miles, to 2-3ds, or about 20 in. mercury. Near the sea the pressure diminishes about 1 inch of mercury for every 950 feet. A hundred cubic inches of air weigh very nearly 30 grains.

The air is composed of four different bodies, *mixed*, not chemically combined with each other—each existing as an independent atmosphere, penetrating through the other to the greatest height from which we have obtained specimens for analysis; and being found in these specimens in the same proportions as in the air at the level of the sea. 100 parts of

air consist chiefly of 21 parts of OXYGEN GAS, and 78 parts of NITROGEN GAS. The other ingredients are in very small proportions; CARBONIC ACID GAS, from about 1-2000th to 1-1000th part; WATERY VAPOUR, very variable in quantity, seldom exceeding 1-100th part. The air also contains small portions of ammonia, and at times traces of nitric acid have been discovered in it.

Besides these ponderable agents, air is permeated by the subtle influences of heat, light, electricity, magnetism, which become combined with or thrown off from its particles, and exert important effects on the air itself, and on bodies exposed to its action.

The atmosphere performs many extensive, important, and varied functions. It contributes materially to the support of the animal and vegetable creation, supplying both with oxygen for respiration, and the latter with a portion of its carbon. It is the great vehicle of sound, which passes through it at the rate of 1142 feet in a second. By its power of reflecting the sun's rays, it diffuses light and prolongs the day. By this reflective power, the air scatters the sun's light in all directions, so that we have light even in places into which the sun is not shining directly; and, when the sun has sunk below the horizon of a place, and there would otherwise instantly be total darkness, the upper portions of air reflect to it a gradually decreasing light—commonly called *twilight*. The duration of twilight is less as the place is farther removed from the axis of rotation; so that it is short and almost inperceptible at the equator; but continues long after sunset in high latitudes. The air has a powerful influence in moderating temperature over the earth's surface, by the interchange between the polar and equatorial regions, caused by the solar heat and the mobility and pressure of its particles. The air supports the semi-condensed vapour in clouds, and by its motions diffuses them over the lands which they fertilize by descending in rain. And this energetic and universally diffused agent exerts a powerful influence, by its chemical action, in promoting the disintegration of the rocky masses, and the decay of dead organic bodies at the earth's surface.

MOTIONS OF THE ATMOSPHERE.—Air in motion is called *Wind*. Whenever, from any cause, a portion of air becomes specifically lighter than the surrounding portions, these, by the laws of fluid equilibrium, rush towards the lighter portion, which is pushed upwards or aside; and these movements go on till equilibrium is restored. This disturbance of atmospheric equilibrium may take place from the action of the sun and moon, which attract the parts immediately under them, causing *atmospheric tides*; but their effect is slight, and only appreciated by very delicate measurements. A change in the amount of watery vapour at a place may upset the balance between the air there and the surrounding air. But the most

frequent, and most powerful, cause of atmospheric movements is, disturbance of equilibrium, caused by change of temperature. Heat expands aërial bodies greatly, so that they become much lighter when their temperature is raised; and the surrounding colder and heavier portions then rush towards and displace them. This is the great cause of *Wind.*

As the air will rush in upon all sides towards the heated portion, winds near the surface of the earth blow *towards the heated region;* and often from all quarters towards a central point. The heated air thus pushed upwards, gets cool, and flows in all directions in upper currents *towards the colder region,* to which it in time descends.

With respect to the velocity of the wind, it has been calculated that a light pleasant breeze moves at the rate of 4 or 5 miles an hour; a brisk wind, from 10 to 20 miles an hour; a high wind, from 30 to 40 miles an hour; a storm, 50 miles an hour; a hurricane, from 80 to 100 miles an hour.

Grand movements of this description are continually going on between the torrid zone and the polar regions. The earth's surface in the torrid zone, being highly warmed by a vertical sun, heats and expands the air there; which is therefore constantly being pushed upwards by a rush of the colder and heavier air from the north and south. In this manner, if the earth did not rotate, there would be a steady north wind in the north part of the torrid zone, and a constant south wind in the southern part of that zone. But as these winds approach the equator, they pass towards a region, where the earth has a much more rapid rotatory motion than they have acquired in the parts from which they have come; and as this more rapid motion is from west to east, it has the same effect as if there was a wind from east to west, or produces an east wind, which, combined with its previous course from north to south, gives rise in the torrid zone to the constant north-east wind north of the equator, and south-east wind, south of the equator. These are the TRADE-WINDS. They extend from near the equator to about 28° or 30° N. or S. latitude, varying in their limits according to the movements of the sun north and south of the equator. Near the equator, where the earth's rotatory motion is greatest, and where the opposite north-east and south-east trade-winds meet, the wind is east or calm, and irregular breezes prevail. This takes place from about 3° to 10° N. latitude, where there is a zone between the northern and southern trade-winds, called the zone of calms or variables; this is coloured pink in the Physical Chart, fronting p. 482. The regular trade-winds are north and south of this zone; they are coloured green in the Chart.

Next to the trade-winds, the most regular winds are the MONSOONS, which prevail in the south of Asia and the Indian Ocean. The district of the monsoons extends from the east

coast of Africa to about 135° E. long., and from the southern parts of Asia to about 10° S. lat. From April to October, when the sun is vertical north of the equator, and the land there highly heated, a south-west wind blows from about 3° S. lat., over the northern part of the Indian Ocean, Hindostan, and the Chino-Indian States, and Indian Archipelago: in the same districts, during the next half-year, a north-east wind prevails. From 3° to 10° S. lat., there is a south-west wind from April to October, and a north-east wind during the next half-year. The monsoons are attributed to the trade-winds, modified by the sun's position, and the peculiar position of the Indian Ocean in reference to the mass of land in Africa, Asia, and Australia.

In countries in or near the torrid zone, and adjoining the sea, where the land becomes much heated by the high elevation of the sun, there are winds of a pretty uniform character, called LAND and SEA BREEZES. As the day advances, the land becomes more highly heated than the water; the air above the land is therefore more rarefied than the air above the sea, and a current sets in from the sea towards the land, called a *sea-breeze.* But after the sun has gone down, the land cools rapidly, and becoming colder than the adjacent water, the air above the sea is more rarefied than the air above the land, and a breeze sets in from the land towards the sea, called the *land-breeze.*

HURRICANES are another description of winds, common in the Gulf of Mexico and among the West India Islands, in the Atlantic Ocean east of North America and north-west of Africa, in the Indian Ocean, and in the Chinese Seas. They have been ascertained to be masses of air many miles in diameter, rotating round a central point, where it is calm, and which has at the same time a progressive motion in one fixed direction. The interesting and important fact has been now established, that hurricanes always revolve in the same way in the same hemisphere; from which the bearing of their centres, near which their fury is greatest, can be ascertained; and thus, by knowledge of the laws of storms, and skill in guiding his ship, a navigator, if he cannot get out of the hurricane, may at least avoid running into a more dangerous part of it.

Certain winds, found only in certain places, are known by peculiar names. The SIMOOM, a hot, dry, burning wind, of a most noxious and irritating character, frequently occurs in the deserts of Arabia and Africa, the arid sands of which impart a high temperature to the air, unmitigated by the tempering influence of water, and often aggravated by the presence of particles of sand. The sand, and the extreme dryness, which causes the skin, mouth, and throat to become parched, have too often made this wind fatal to travellers. It is called the

HARMATTAN in the west of Africa, where it blows from the great desert towards the Gulf of Guinea. It affects the vegetable more than the animal creation. A burning south-east wind prevailing in the Mediterranean, Sicily, and the south of Italy, is called the SIROCCO. North-east winds which blow in the daytime during July and August, in the east of the Mediterranean, are called ETESIAN WINDS. The hurricanes in the Chinese Seas are called TYPHOONS.

ATMOSPHERIC MOISTURE.—Everywhere the air contains a quantity of moisture, the varying amount and conditions of which produce important effects. This moisture arises from the spontaneous evaporation continually going on from the surface of the various waters of the globe. It is called *vapour*, and is driven off from the water, and sustained in that state, solely by the influence of heat. No space can contain more than a certain amount of vapour at a given temperature. If it contain all that it can hold, it is said to be *saturated;* any reduction of temperature will then cause a portion to be condensed, or deposited in rain, snow, hoar-frost, or dew. If a portion of air be not saturated with moisture, none will be deposited till it is lowered in temperature, below the temperature which the existing vapour would saturate. This point is called the *dew-point;* and it is an important element in considerations relating to the weather, as the distance between the actual temperature and the dew-point determines the probability of rain falling or not. If the two temperatures are near, a small reduction may bring the atmosphere below the dew-point; if they are far removed, a great reduction of temperature is requisite to effect this.

Evaporation takes place at all temperatures—even from ice and snow—if the air above be not saturated. The vapour then rises into the atmosphere, is spread abroad by winds, and diffused over the land. When sufficiently cooled, it forms thin vesicles, or a fine powder, a mass of which forms a fog or cloud. Condensed into the liquid state, it forms *rain-drops* if the condensation take place in the atmosphere; *dew-drops* when the condensation is effected by contact with cold surfaces. When the frozen moisture forms rounded compact masses, *hail* is produced. When vapour condenses at once into the solid state, crystals are formed, called *snow* when the congelation takes place in the air; *hoar-frost* when the vapour is frozen by contact with cold solid bodies, as the ground, leaves, etc. Clouds at a great elevation are believed to consist of minute crystals.

The greatest amount of evaporation takes place in the torrid zone, from the great heat prevalent there; and the atmosphere there contains much moisture, held in the state of invisible vapour by the high temperature. The quantity diminishes towards the poles, owing to the cold; and towards the interior

of the great continents, owing to distance from the sea. In colder regions, the vapour is frequently in the semi-condensed state of cloud or fog. The latter occurs, to borrow the words of Mrs Somerville, "where the soil is moist and warm, and the air damp and cold. Thick and frequent fogs arise in England, where the coasts are washed by a sea of elevated temperature; and the excess of the heat of the gulf-stream above the cold moist air is the cause of the perpetual fogs in Newfoundland. When two masses of air of different temperature meet, the colder, by abstracting the heat which holds the moisture in solution, causes the particles to coalesce and form drops of water, which fall in the shape of rain by their gravitation." Since heat is the cause of evaporation, rain is very unequally distributed, and with the heat decreases from the equator to the poles. From the island of Otaheite in the Pacific, to Uleaborg in Finland, the annual quantity of rain decreases from 150 inches to 13. It is, however, more abundant in the New World than the Old; 115 inches fall annually in tropical America, while in the Old World the annual fall is only 76 inches: so also in the temperate zone of the United States the annual quantity is 37 inches, while in the Old Continent it is but 31¾ inches.

"Between the tropics," says Mrs Somerville, "the rains follow the sun: when he is north of the equator, the rains prevail in the northern tropic; and when he is south of that line, in the southern; hence one-half of the year is extremely wet and the other half extremely dry; the change taking place near the equinoxes. Nevertheless in countries situated between the 5th and 10th parallels of latitude, north and south, there are two rainy seasons and two dry; one occurs when the sun passes the zenith in his progress to the nearest tropic, and the other at his return, but in the latter the rains are less violent and of shorter duration. Although the quantity of water, which falls between the tropics in a month is greater than that of a whole year in Europe, yet the number of rainy days increases with the latitude, so that there are fewest where the quantity is greatest. Neither does it fall continually during the rainy season between the tropics, for the sky is generally clear at sunrise,—it becomes cloudy at ten in the morning, at noon the rain begins to fall, and, after pouring for four or five hours, the clouds vanish at sunset, and not a drop falls in the night, so that a day of uninterrupted rain is very rare. At sea, within the region of the trade-winds, it seldom rains; but in the narrow zone between them known as the variables, in both the great oceans, it rains almost continually, attended by violent thunder-storms. Throughout the whole region where the monsoons prevail, it is not the sun directly, but the winds, that regulate the periodical rains. In these countries the western coasts are watered during the south-west monsoon, which

prevails from April to October; and the eastern coasts are watered during the north-east monsoon, which blows from October to April."

In the arid deserts of Africa and Arabia, in the desert of Gobi, in parts of Mexico and California, and Peru, it never rains. At the equator the annual fall is 95 inches, in about 80 days; on the west coast of England, 37½ inches in 152 days; on the east coast of England, 25½ inches in 152 days; at St Petersburg, 17 inches in upwards of 100 days.

The following table exhibits the annual fall of rain at several latitudes:—

Mean between the Tropics		Inches	95
Mean North Temperate Zone		...	37
Mean South Temperate Zone		...	26
Cherra Poongee	Latitude 25° 30′ N.	...	600
Mahabaleshwar	... 18° 0′	...	300
Calcutta	... 22° 33′	...	58
New York	... 40° 42′	...	36
British Islands, on the plains		...	24½
London	Latitude 51° 30′	...	23
St Petersburg	... 59° 56′	...	17

Geographical Distribution of Plants.

The vegetable kingdom consists of three great natural divisions, Cryptogamic, Endogenous, and Exogenous plants. These are arranged in subdivisions, ending in about from one to two hundred Natural Families, consisting of certain genera of plants resembling each other in a great number of the leading points in structure, character, and properties.

The Cryptogamic or Flowerless plants are those whose mode of producing their seeds is indistinct; as lichens, mosses, the fungous tribe, seaweeds (algæ), ferns.

The Endogenous or Monocotyledonous tribe are those which grow by the addition of new matter within, as the first name indicates, or have but one seedlobe, as implied in the second. The veins of their leaves are in parallel rows; and the number 3 prevails in the divisions of the flower. Grasses, the grain-yielding plants, as wheat, barley, rye, rice, Indian corn, sugar-cane, lilies, palms, belong to this division.

Exogenous or Dicotyledonous plants, have their growth by the addition of new matter near their outer surface, and have two seedlobes. The veins of the leaves are in an irregular network; and the number 5 usually prevails in the division of the parts of the flower. This is the most numerous class of flowering plants, embracing the trees, shrubs, and greater number of the herbs of temperate regions. Oak, fir, beech, poplar, chestnut, laburnum, rhododendron, heath, the great families of rosaceæ, umbelliferæ, papilionaceæ, and compositæ (thistle and daisy tribe) are examples.

Some plants are *evergreens*, that is, the new leaves appear before the old ones have withered and fallen off; others are *deciduous*, that is, the leaves fall off, and the plant is leafless for a season; others are *annual*, or *biennial*, that is, the whole plant entirely perishes in one or in two seasons.

In tropical regions, the dicotyledonous tribe is to the monocotyledonous tribe as about 4 to 1; in the temperate zones, as about 6 to 1; in the frozen regions, as about 2 to 1. There, the flowering plants are found in but small proportion,—the cryptogamic families predominating. In the temperate regions, about 1-6th of the flowering plants are *annual;* in the torrid zone, less than 1-20th; in the frigid zone, 1-30th.

According to Humboldt, the earth, viewed as to vegetation, may be divided into 8 zones. These are named according to the plants which *prevail* in each zone; spreading, however, into those on each side of it.

1. The equatorial zone, or region of palms and bananas, in which also the principal spice plants are found, extending to about 15° on each side of the equator.

2. The tropical zone, from 15° to the tropics, the region of tree-ferns and figs.

3. The subtropical zone, from the tropics to about 34°, the region of myrtles and laurels.

4. The warm temperate zone, from 34° to 45°, the region of evergreen trees.

5. The cold temperate zone, from 45° to 58°, where European or deciduous trees prevail.

6. The sub-arctic zone, from 58° to the arctic circle, the region of pines.

7. The arctic zone, from the polar circle to 72°, the arctic zone of rhododendrons.

8. The polar zone, beyond 72°, the region of alpine plants.

Changes in vegetation, similar to what are found in passing from the equator towards the poles, occur in ascending from the base to the summits of mountains, as is strikingly exhibited on Etna, the Peak of Teneriffe, the Alps, Pyrenees, Andes, and Himalaya Mountains. Each plant has its limit in elevation, as in latitude. On Teneriffe, Humboldt found the vegetation disposed in about five zones; the *region of vines*, from the shores to an elevation of about 640 yards; the *region of laurels;* the *region of pines*, from 1920 to 2770 yards; a zone characterized by a species of *broom;* the *region of the grasses*. Above these are a few cryptogamic plants. The date is found in the lower region.

Climate is the chief cause of the varieties of vegetation at different places. Another great cause is the composition of the soil, its dryness, moisture, etc.*

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* The limits of the cultivation of the vine, and the northern limits of wood and wheat are shown in the Physical Chart, fronting p. 482.

GEOGRAPHICAL DISTRIBUTION OF ANIMALS.

Animals are arranged in two grand divisions, VERTEBRATED ANIMALS, having a spine or backbone and internal skeleton; and INVERTEBRATED ANIMALS, without those parts. Man and the higher orders of animals belong to the former division. Insects, shell-fish, etc., belong to the latter. The Vertebrata are in four classes,—*Mammalia*, which suckle their young; *Aves* (birds); *Reptilia* (reptiles), and *Pisces* (fishes). The Invertebrata are in three principal sections,—*Articulata* (or jointed animals), such as worms, insects, shrimps, lobsters; *Mollusca* (soft-bodied animals), as snails, mussels, and other shell-fish; and *Zoophyta* or *Radiata*, the lowest tribe, such as coral, sponge, star-fish.

Animal life, like vegetation, is most rich and luxuriant in tropical regions. The zoophytes, as coral and madrepore, are abundant, the shell-fish large and brilliantly coloured, particularly in the Indian seas. The insect tribe and birds, in number and beauty, and richness of colouring, are nowhere so striking—the reptile tribe flourish—and the large mammalia, —whether they live on vegetables, as the elephant and rhinoceros,—or are carnivorous, as the tiger and lion,—are developed in the highest degree. From this zone, so full of both vegetable and animal luxuriance, the animal as well as the vegetable world gradually becomes stunted or dwindles, till near 80° latitude, where the extreme cold will scarcely permit the existence of animal life. The elephant is found only in India, the Indo-China states, and Africa; the lion in Asia and Africa; the kangaroo in New Holland; the reindeer near the arctic circle; the monkey tribe little beyond the torrid zone. Those useful animals, the horse, ox, dog, sheep, goat, and hog, flourish through a vast range, extending from near the arctic circle to the Falkland Islands, near the southern extremity of the American continent.

In the waters also there are vast numbers and varieties of animals and vegetables; different kinds being found in different places according to the composition, depth, temperature, etc., of the water in which they live.

GEOGRAPHICAL DISTRIBUTION OF MAN.

Mankind have been divided into five great *races* or *varieties*, not distinct species, all agreeing in those grand features which naturalists have decided on as determining species. They are the INDO-EUROPEAN OR CAUCASIAN, the MONGOLIAN, the MALAYAN, the NEGRO OR ETHIOPIAN, and the AMERICAN RACES. (See the sketch on the Physical Chart, fronting p. 482.)

In the Indo-European or Caucasian race, the face is oval, the features regular, the hair long, fine, and in waving curls,

the head finely shaped, rounded, having the upper and anterior portion large. This race inhabits all Europe except Lapland, Finland, and part of Hungary; Africa, from the Mediterranean to about 20° N. latitude; and Asia, west of a line from the river Obi to the Ganges (or from about the south of the Caspian Sea to the Brahmapootra). It includes the most refined, civilized, and powerful nations of ancient and modern times, as the Assyrians, Persians, Jews, Greeks, Romans, Arabians, Hindoos, Afghans, the nations of modern Europe, and their descendants in America. The Caucasian races settled in Europe are in three great sub-families,—the *Slavonians*, occupying Russia, Poland, and parts of Austria and Turkey; the *Teutonic* or *Gothic tribes*, occupying the greater part of the British Isles, Norway and Sweden, Denmark, Germany, Prussia, Holland, and parts of Belgium, Austria, and Switzerland;—and the *Celtic race*, found in the north-west of Scotland, west of Ireland, Wales, and, mixed with descendants of the ancient Romans and of Gothic tribes, in Belgium, France, Switzerland, Italy, Spain, Portugal.

The Mongolian race have projecting cheek-bones, a flat face, a broad skull, flattened at the sides, small black eyes obliquely set, a yellowish olive skin, straight black hair, and scanty or no beard. The Laplanders, Finns, and Hungarians in Europe, and all the Asiatics north and east of a line from about the south of the Caspian Sea to the Brahmapootra, are of the Mongolian race. The Hungarians, however, long placed in the midst of Caucasian races, have diverged considerably from the Mongolian character. The inhabitants of Greenland and the extreme north of America are of this race.

The Malayan race occupies the Malay Peninsula, the Indian Archipelago, and Polynesia. It has considerable resemblance to the Mongolians, being intermediate between that race and the Negroes or Ethiopians.

The Negro or Ethiopian race, marked by black and woolly hair, low and slanting forehead, projecting jaw and flattened nose, with thick lips, occupies the greater part of Africa, south of the Great Desert, part of Madagascar, Australia, New Guinea, and adjacent islands.

The American race is characterized by regular features, nose often aquiline, high but retreating forehead, and reddish copper-colour. It includes the native tribes of America; excepting the Esquimaux in the extreme north, who are of the Mongolian race.

GEOLOGY.

GEOLOGY is the science of the structure of the earth and the changes which go on at its surface.

At first sight, it would appear that the materials at the surface of the earth are not arranged in any regular order, and that they are subjected to but few changes. But this is not the case. It has been found that the various matters at the earth's surface are arranged on a definite plan, and that they are undergoing, though very slowly, changes which in time will greatly alter the surface of every country.

We do not know much of the interior of the earth; it is thought that a depth of ten miles is the greatest extent of which we have any real knowledge. This is but an insignificant part, being no more than 1-400th of the distance from the surface to the centre.

When the parts below the surface are examined, as in quarries, railway cuttings, mines, and places where rocks are exposed to the weather, it is found that the various rocks or mineral masses are arranged in layers over each other, called *beds* or *strata*. These layers are often horizontal, sometimes inclined; and they are arranged in a certain regular order of succession, which order prevails in the strata in all countries, though some of the series are occasionally wanting.

Wherever rocks are exposed to the air, they become worn down by degrees into fragments, crumbling ultimately into sand or earth; and all the masses of earth, sand, and gravel found, are believed to have been formed from hard rocks by the action of air and water. This breaking down of rocks is called *disintegration.*

In the interior of many rocks, there are found the remains or impressions of animals or plants, which had lived in remote periods, and been buried among the matter of which the rock was formed. These are called *fossil or organic remains.*

Rocks* which are arranged in strata are called STRATIFIED ROCKS; but there are some rocks found in irregular masses. These are called UNSTRATIFIED ROCKS.

Considered according to their mode of origin, rocks are of three kinds:—

1. ROCKS OF ERUPTION, which have issued from the interior of the earth in a fluid or semi-fluid state from heat; called also *igneous, volcanic, plutonic, unstratified rocks.* Examples,—granite, trap.

2. SEDIMENTARY ROCKS, which have been precipitated and deposited on the earth's surface from a fluid, in which the most minute particles were dissolved or held in suspension. Examples,—sandstone, chalk, beds of clay and some kinds of limestone. When the parts composing them are larger, they

are called conglomerates, as the conglomerate of the old red sandstone.

3. TRANSFORMED or METAMORPHIC ROCKS, in which the internal texture and mode of stratification have been changed after the formation of the rock. Example,—crystalline marble.

The two last are stratified rocks.

Rocks, however hard and apparently durable, are broken down by the action of air and moisture, and by the force of wind, rain, frost, and running water. These broken fragments are still farther disintegrated by rubbing against each other in streams. The larger and heavier parts remain at the bottom, but are gradually carried downwards by the force of the stream; while the finer particles remain suspended in the water, and are carried out into the lake or sea into which the river flows. There they gradually subside, the heavier particles first, and are deposited in strata or beds, at the bottom. The matter thus deposited contains the remains or impressions of the forms of many plants and animals, which had been carried down along with it. In this manner, the solid matter of the world is worn down to small particles, and deposited in strata at the bottom of the ocean, or of large lakes.

From the changes in the quantity of water in rivers at different seasons, and the alternate flow and ebb of the tide the deposits vary in thickness, and sometimes one matter predominates, sometimes another.

It has been calculated that the river Ganges every year transfers from the land to the sea 6368 millions of tons of solid matter; and similar actions are going on in all the rivers of the world.

These strata do not always remain at the bottom of the water; they are sometimes raised by volcanic force, and become dry ground, fit for the growth and abode of land plants and animals. Nor do they always remain horizontal, as when first deposited, or undisturbed. Volcanic (or erupted) matter breaks through them, raises them into inclined positions—sometimes almost vertical—spreads in between them—alters their mineral character, and forms round abrupt masses lying over them.

Volcanic rocks are formed mostly from melted rock or lava which has issued from the interior of the earth; sometimes from showers of ashes which have issued from the craters of volcanoes, and spread over the adjoining country. Volcanic heat alters the sedimentary rocks; gives rise to gases and hot springs which issue in many places; causes earthquakes; and is believed to produce that gradual rising of the land, which is going on even at the present day, as in Sweden.

Everywhere the earth is warmer the deeper the place examined—the temperature increasing at the rate of about 1° Fahrenheit for every 54 feet from the surface. From this, from

the existence of volcanoes at so many parts of the earth's surface, and of hot springs at others, from the water of artesian wells being everywhere warmer the greater the depth from which it comes, and from other considerations, it has been thought not improbable, that at a great depth the matter of the earth in some places is so hot as to be in a fluid state, like molten lava ; and it has been conjectured, that at one time the whole earth was one intensely hot fluid mass, and that the solid land has been formed by the more rapid cooling of the parts at the surface.

Rocks are also formed by animals such as the coral, myriads of which have raised, and are still raising, vast reefs in the tropical seas.

The surface of the earth is also altered by the action of the sea on the rocks or land at its shores. It gradually wears away the lower parts, and undermines them; when they fall and, in course of time, are broken down into fragments by the beating of the waves. In this way some conglomerate rocks are formed.

Changes also are produced by the action of encrusting waters, which deposit mineral matter on bodies with which they come in contact; and of petrifying springs, which penetrate the substance of plants and animals, remove the organic matter, and replace it with mineral matter, still retaining the same outward form, and even the same internal structure. The petrifying matter is usually carbonate of lime or siliceous earth.

Changes are also effected in the arrangement of the solid matter of the earth by the force of the wind on drifting sand, by the great currents of the ocean, and by icebergs, which transport to great distances huge masses of rocks, and the bodies of animals which are embedded in them.

The solid matter of the earth consists chiefly of *silica*, called also the earth of sand and flints; *lime*, united with carbonic acid, forming carbonate of lime (the principal ingredient in marble, chalk, limestone, and the shells of animals, and which enters also into the composition of other rocks); *alumina*, or the earth of clays; *magnesia;* and *oxide of iron*. Silica forms about one-fourth of the solid matter of the known parts of the globe.

Considered with respect to their order of superposition, and commencing with those which are undermost, and are therefore considered the oldest, the solid masses of the earth's crust may be arranged as follows :—

1. UNSTRATIFIED ROCKS.—Of these GRANITE is the most extensive, and often the lowest, and the oldest. It is supposed to form one vast bed underlying all the others, and it is found in some of the highest mountain-peaks. Granite and the other unstratified rocks, as *porphyry*, *serpentine*, *trap*,

basalt, etc., are often found in irregular masses and veins, breaking through and overlying the others, changing their position and mineral character. All these are believed to have been once in a fused state, by the action of heat. They contain no organic remains.

II. Stratified Rocks.—These are generally divided into ten systems, which we mention in order:—

Laurentian System.—This is the oldest system of stratified rocks so far as is known at present. The rocks, which are hard and crystalline, are largely developed in Canada, to the north of the river St Lawrence, and they are also met with in the Hebrides, and on the north-west coast of Scotland. The only fossil that has yet been detected is a very minute shell called *Eozoon Canadense.*

Cambrian System.—This system is largely developed in Wales; hence its name. The rocks include sandstones, flagstones, and grits, and are several thousand feet in thickness. The fossils are mostly of marine character, including shell-fish and zoophytes. In some of the sandstones may be seen the ripple-marks left by the tide, and the distinct impression of raindrops.

Silurian System.—The rocks belonging to this system are similar to those of the Cambrian system, but fossils are more abundant. They include all the lower forms of marine life—zoophytes, radiata, molluscs, and crustaceans. In this system also we meet with traces of land vegetation of a low type. The rocks are rich in ores of mercury, gold, and silver. The system is met with in Wales, Cumberland, Ireland, and throughout the greater part of Scotland.

Devonian or *Old Red Sandstone.*—This system is well developed in Devon, as well as on the borders of Wales, and in the central parts of Scotland. The rocks consist of sandstones, some of which are of a deep red colour. The characteristic fossils are fishes of various forms, but all covered with hard enamelled plates or scales. We find also distinct traces of land plants such as reeds and ferns.

Carboniferous System.—This is one of the most important in the whole series, as it contains the great stores of coal and iron, upon which the commercial prosperity of this country so largely depends. A characteristic rock belonging to the system is the blue mountain limestone. Rich deposits of coal are found in various parts of England and Scotland, but not much is met with in Ireland, though mountain limestone is there very abundant. The coal is carbonized vegetation, and in the coal-bearing strata are found traces of tree-ferns and gigantic pines.

Permian System.—The principal rocks belonging to this system are sandstones and yellowish magnesian limestones. The fossils are similar to those of the last system, but are not

nearly so abundant. The system derives its name from Perm, a province of Russia, where the characteristic rocks abound.

Triassic System.—The word *triassic* means triple, and the system is so called because in Germany it contains three well-marked divisions: Keuper, Muschelkalk, and Bunter. In this system we find the earliest trace of mammals. In England the Triassic system extends in a broad belt from the mouth of the Tees to the junction of the Avon and Severn, and then northward so as to include the county of Cheshire.

Oolitic System.—The word *oolitic* means egg-stone, and the term is applied to this system because of the character of some of its limestones. The distinctive fossils are huge reptiles belonging to the lizard family, such as the ichthyosaurus and pterodactyle. The system stretches right across England from Yorkshire to Dorset.

Cretaceous or *Chalk System.*—This is found in all the chalk districts of England. When examined by a powerful microscope, chalk is found to be composed of myriads of minute shells, such as still form a kind of whitish mud at the bottom of some parts of the Atlantic.

Tertiary System. — Formerly the various systems of stratified rocks were grouped in three divisions: Primary, Secondary, and Tertiary. The first two have been subdivided into the systems already mentioned, but the Tertiary still retains its name. The Tertiary deposits consists generally of clays, limestones, marls, sands, and grits; and in the fossils we find species of every existing order of animals, except man. The Tertiary strata are met with in Essex, Middlesex, Hampshire, and other counties, and generally occupy well-defined tracts or "basins," such as the "London basin."

The close of the Tertiary period seems to have been accompanied with intense cold. The tops of the chief mountains in Great Britain were covered with glaciers, traces of which may be distinctly seen in Wales and Cumberland. After a time the whole surface—not only of Great Britain, but of northern Europe as well—seems to have sunk gradually, and the glaciers were changed into icebergs. After a time—how long it is impossible to say—the land slowly emerged from the sea; the temperature gradually grew milder; and the distribution of land and water took its present form.

CHIEF ROOTS OF GEOGRAPHICAL NAMES.

It is believed that the following Glossary may be made of essential use to the learner of Geography, by teaching him the meaning of the names of places, and so fixing them more firmly in his memory. It may be used in various ways. Portions of it may be given out, day by day, to be got by heart. The teacher may farther require the pupil to find instances of the occurrence of the same roots in other names than those which appear in the Table. Or a number of names being given to the pupil, he may be asked to point out and explain their roots.

It will be readily understood that Ang.-Sax. stands for Anglo-Saxon; Arab. for Arabic; Basq. for Basque; Celt. for Celtic; Chald. for Chaldee; Chin. for Chinese; Dan. for Danish; Dut. for Dutch; Engl. for English; Esth. for Esthonian; Fr. for French; Germ. for German; Gr. for Greek; Hebr. for Hebrew; Hindost. for Hindostanee; Hung. for Hungarian; Ital. for Italian; Lat. for Latin; Mal. for Malay; Pers. for Persian; Port. for Portuguese; Russ. for Russian; Sanscr. for Sanscrit; Sclav. for Sclavonic; Span. for Spanish; Swed. for Swedish; Tart. for Tartar; Teut. for Teutonic; Turk. for Turkish.

Aa, Aar, Are, Aire Ayr (Celt.), *water;*—the names of rivers in the British Islands, France, Flanders, Switzerland, Russia.

Ab, Ap (Sanscr.), *water;*—as in Pun*jab*, Do*ab*.

Abad (Sanscr.), *a dwelling, an abode;*—Allah*abad*, Jelal*abad*.

Abbe (Fr.), **Abbey, Abbot** (Engl.), *an abbey, an abbot;*—*Abbe*ville, *Abbey*leix, *Abbots*ford.

Aber (Celt.), *the mouth of a stream;*—*Aber*deen, *Aber*gavenny.

Acqua (Ital.), **Agua** (Span.), **Aigues, Aix** (Fr.), *water;*—*Acqua*pendente, *Agua*rico, *Aigues*-mortes, *Aix*, *Aix*-la-Chapelle.

Adel (Teut.), *noble;*—*Adel*fors, *Adel*sberg.

Al, El (Arab.), *the;*—*Al*cantara, *Al*giers, *El*mina.

Alcala (Arab.), *a castle or frontier town;*—*Alcala*-la-Real.

Alt, Alten (Germ.), *old;*—*Alt*kirch, *Alten*bruck.

Anti (Gr.) *opposite to;*—*Anti*-Lebanon, *Anti*-Taurus.

Ard, Aird (Celt.), *a height, a promontory;*—*Ard*namurchan, *Ard*fert, Kin*naird*.

Argue, Ergue (Fr.), *a field, a territory;*—Cam*argue*, Rou*ergue*.

Au (Germ.), *a meadow or prairie;*—*Au*erbach, Aar*au*.

Auch, Ach (Celt.), *a field;*—*Auch*inleck, *Auch*leuchries, *Ach*ray.

Auchter, Uachter (Celt.), *upper or high;*—*Auchter*arder.

Avon (Celt.), the name of many rivers in the British Islands;—Strath*avon*, Glen*avon*, *Avon*more.

Bab (Chald. and Arab.), *a court;*—*Bab*ylon, *Bab*elmandeb.

Bach, Pach (Germ.), *a stream;*—Schwarz*bach*, Ans*pach*.

Bad (Germ.), *a bath;*—*Bad*en, Carls*bad*.

Bahia (Span.), *a bay;*—*Bahia*-de-Todos-los-Santos.

Bahr (Arab.), *a river;*—*Bahr*-el-Abiad, *Bahr*-el-Azrek.

Bal, Ball, Bally (Celt.), *a house, hamlet, or village;*—*Bal*moral, *Ball*antrae, *Bally*shannon.

Beal, Beallrach, Balloch (Celt.), *a pass, an outlet;*—*Beal*nambo, *Bealeach*namban, *Balloch*myle.

Beau (Fr.), *fair, beautiful, good;*—*Beau*preau, *Beau*regard, *Beau*ville.

Beer (Hebr.), *a well;*—*Beer*sheba.

Beit (Arab.), **Beth** (Hebr.), *a dwelling, temple, or place;*—*Beit*-el-fakih, *Beth*el, *Beth*esda, *Beth*lehem.

Belle (Fr.), *fair, good, beautiful;*—La-*Belle*-Alliance, *Belle*isle.

Ben (Celt.), *a mountain;*—*Ben*nevis, *Ben*lomond.

Berg (Germ.), *a mountain;*—Vorall*berg*, Donners*berg*.

Black (Engl.), *black, dark;*—*Black*stone, *Black*adder, the *Black* Sea.

Blair (Celt.), *a plain or open;*—*Blair*athole, *Blair*gowrie.

Blanc (Fr.), **Blanco** (Span.), **Bianco** (Port.), *white;*—Mont *Blanc*, Cape *Blanco*, Castello *Bianco*.

Bottle, Battle (Ang.-Sax.), *a dwelling, an abode;*—Har*bottle*, New*battle*.

Brae (Celt.), *a hill, a slope;*—*Brae*mar, *Brae*riach, the *Braes* of Angus.

Bridge (Engl.);—Cam*bridge*, *Bridge*water, Stock*bridge*.

BRUCK, PRUCK (Germ.), *a bridge;* —Osna*bruck*, Inns*pruck*.

BRUNN (Germ.), *a well or fountain;* —Schoen*brunn*.

BUENO (Span.), BUONO (Ital.), *good;* —*Buenos*-Ayres, *Buona*parte.

BURGH, BURG, BOROUGH, BORROW, BROUGH, BURY (Engl.), BERG (Germ.), BORG (Dan.), BOURG (Fr.), BORGO (Ital.), *a fortified place, a municipality, or corporate town;*—Edin*burgh*, *Burgh*-upon-Sands, *Burg*head, Marl*borough*, *Borrow*stounness, *Brough*ty-ferry, Canter*bury*, Nurem*berg*, Aal*borg*, Cher*bourg*, *Borgo*novo.

BURN, BOURN (Engl.), *a streamlet;* —Bannock*burn*, Ash*bourn*.

BY (Teut.), *a dwelling, a hamlet, a village;*—Apple*by*, Kirk*by*, Locker*by*.

CAER, CAR (Celt.), *a fortified place;*—*Caer*narvon, *Car*lisle, *Car*low, *Car*haix.

CAIRN, CARN (Celt.), *a heap of stones, a mountain;*—*Cairn*gorm, *Carn*wath.

CALF (Engl.), *a small island beside a large one;*—*Calf* of Man, *Calf* of Eday.

CAMBUS (Celt.), *the bend of a river;*—*Cambus*kenneth, *Cambus*nethan.

CAMPO (Ital. and Span.), CHAMP (Fr.), *a field, a plain;*—*Campo*-Formio, Fé*camp*, Beau*champ*, *Champ*agne.

CASTLE (Engl.), CASTEL, CASTELLO (Span. and Ital.), CASTRO (Span.), CASSEL, KASSEL (Germ.), KASTRI (Gr.), *a castle;*—*Castle*reagh, New*castle*, *Castel*-Rodrigo, *Castello*-Bianco, *Castro*-Marino, *Cassel*, *Kastel*laun, *Kastri*.

CEAN, CAN, KIN (Celt.), *a point, a promontory, a headland;*—*Can*tyre, *Can*dor, *Kin*tyre.

CHA, SHA, SCHA (Chin.), *sand;*—Kin-*sha*-Kiang, *Sha*mo.

CHAN, SCHAN or SHAN (Chin.), *a mountain;*—Y*chan*, Kin*shan*.

CHATEAU, CHATEL (Fr.), *a castle;*—*Chateau*-Thierry, *Chatel*herault, Neuf*chatel*.

CHEHER, CHERRY (Turk. and Pers.), *a house, a town;*—Allah*cheher*, *Cheer*istan, Pondi*cherry*.

CHESTER, CESTER, CASTER (Ang.-Sax.), *a fortified place;*—*Chester*, Man*chester*, Glou*cester*, Lan*caster*.

CITTA, CIVITA (Ital.), CIUDAD, CIVIDAD (Span.), *a city;*—*Citta*-Nuova, *Civita*-Vecchia, *Ciudad*-Rodrigo, *Cividad*-de-la-Trinidad.

CLIFF (Engl.), *a rock, a hill-side;*—Rat*cliffe*, *Clif*ton.

COL (Ital. and Span.), *a mountain, a mountain-pass;*—*Col*-du-Geant.

COMBE, CWM (Celt.), *a hollow or vale;* —Wy*combe*, *Cwm*neath.

COT, COAT (Engl.), *a cottage, a hut;* —Fen*cotes*, Salt*coats*.

COTE, COTTA, KOTTA (Sanscr.), *a fort, a dwelling;*—Jagar*cote*, Deir*cotta*.

COURT, COUR, COR (Fr.), *a walled enclosure, a court;*—Har*court*, *Cour*celles, *Cor*beton.

CRAIG, CARRICK, CROAGH (Celt.), *a crag, a rock, a rocky mountain;* —*Craig*millar, *Craig*phadric, *Car-rick*fergus, *Croagh*patrick.

DAGH (Pers.), *a mountain;*—*Dagh*estan.

DAIR (Arab.), *a house;*—*Dair*-el-Kamar.

DAL (Celt.), *a territory;*—*Dal*riada, *Dal*ry, *Dal*keith.

DALE, DAL (Teut.), *a valley, a dale;* —Dove*dale*, Tweed*dale*, *Dale*carlia.

DAM, DAMM (Germ.), *a bank, a sluice, a dam;*—Amster*dam*, Rotter*dam*.

DARIA, DERIA (Tart.), *a river;*—Kizil-*daria*.

DEN (Engl.), *a ravine;*—Wal*den*, Hawthorn*den*.

DHU, DHUIBH, DUFF, DU, DO, DOO, DOV (Celt.), *black, dark;*—Ross*dhu*, Benmuick*duibh*, *Duff*erin, *Du*loch, Avon-*Du* (the old Highland name of the Forth), *Do*n (Do-avon), *Doo*n (Doo-avon), *Dov*ern.

DIB, DIV, DIVA (Sanscr.), *an island;* —Seren*dib*, Mal*dives*.

DJEBEL, JEBEL (Arab.), *a hill;*—*Djebel*-el-Mousa, *Djebel*-el-Tarik (Gibraltar), *Jebel*-Kumri.

DORF (Germ.), *a dwelling, a village;* —Dussel*dorf*, Alt*dorf*, Neu*dorf*.

DRUM (Celt.), *a ridge;*—*Drum*melzier, *Drum*cliff.

DUN, DUM, DON (Celt.), *a height, a fortified place;*—*Dun*fermline, *Dun*gannon, *Dun*kirk, *Dum*barton, *Dum*fries, Snow*don*, Chateau*dun*.

EAST, EST, ES (Engl.), *eastern;*—*East*bourne, *Es*sex.

ECCLES, EGLES (from the Lat. ECCLESIA), *a church;*—*Eccle*fechan, *Eccles*machan, *Eglwys*fair, Terr*egles*.

EISEN (Germ.), *iron;*—*Eisen*berg.

ERMAK, IRMAK (Turk.), *a river;*—Kizil*ermak*, Jekil*irmak*.

ES, EIS (Gr.), *at;*—Setines (contracted from *Es* Athinai), Stamboul (from *Es* tin polin).

ESK, UISC, USK, EWES, OUSE (Celt.), *water;*—Glen*esk*, *Esk*dale, Inver*esk*, *Usk*, *Ewes*dale, *Ouse*.

Eski (Turk.), *old*;—*Eski*cheher.
Etania, Itania (Basq.), *habitation*;—Lusi*tania*, Aqui*tania*.
Ey, Ay, Ae, A, Ea, Oe (Teut.), *an island*;—Ork*ney*, Bard*sey*, Colon*say*, Cumbr*ae*, St*affa*, Angles*ea*, Far*oe*.

Fell, Feld (Teut.), *a hill, a rock*;—Cross*fell*, Hart*fell*, Goat*fell*, Dovre*feld*, Drachen*fels*.
Ferry (Engl.), *a passage across a river, lake, or firth*;—*Ferry*bridge, Queens*ferry*, Porta*ferry*.
Ferte (Fr.), *a little fort*;—*Ferté*-Fresnel, La *Ferté*-sur-Péron.
Field, Feld (Teut.), *a plain*;—Lich*field*, Donners*feld*, *Feld*kirch.
Firth, Frith, Fiord (Teut.), *an arm of the sea*;—Pentland *Firth*, Solway *Firth*, Flekke*fiord*.
Font, Fontaine (Fr.), **Fonte** (Ital.), **Fuente** (Span.), *a well, a spring, a fountain*; — *Font*enoy, *Fontaine*bleau, *Fos*sano, *Fuentes*-de-Ebro.
Force (Teut.) *a waterfall*;—Aysgarth*force*.
Ford (Engl.), **Furt** (Germ.), *a passage across a river*;—Ox*ford*, Long*ford*, Abbots*ford*, Frank*furt*.
Fort (Engl. and Fr.), *a stronghold*;—*Fort*william, Roche*fort*.
Frank (Germ.), *free*;—*Frank*fort.
Free (Engl.), **Frey** (Germ.), *free*;—*Free*port, *Free*town, *Frey*burg.

Gamla (Swed.), *old*;—*Gamla*-Carleby.
Ganga, Gunga (Sanscr.), *a river*;—*Gang*es, Kishen*gunga*.
Gar, Gur, Ghur (Sanscr.), *a fortified place*;—Kasch*gar*, Star*gar*, Bissen*gur*, Futteh*ghur*.
Garth (Teut.), *a farm*;—Apple*garth*.
Gate (Engl.), *an entrance*;—Rams*gate*, *Gate*house.
Gau, Govia (Germ.), *a village, a township*;—Thur*gau*, Thur*govia*.
Gaut, Ghaut (Sanscr.), *a passage*;—Ram*gaut*.
Gebirge (Germ.), *a mountain*;—Riesen*gebirge*.
Gen (Teut.), *a field*; — Nimue*gen*, Groni*gen*.
Gherd (Pers.), *a town*;—Darab*gherd*.
Gherry, Ghiri (Sanscr.), *a mountain*; — Kistna*gherry*, Dhawala*ghiri*.
Glen (Celt.), *a valley*; — *Glen*coe, *Glen*dalough, Ruther*glen*.
Gorod, Grad (Sclav.), *a town*; — Nov*gorod*, Novy*grad*, *Gorod*ets, *Grad*iska, Bel*grade*.
Graven (Germ.), *a chief, a noble*;—*Grafen*thal.
Grand, Grande (Fr. and Span.), *great*;—*Grand*-Lucé, Rio-*Grande*.
Great (Engl.);—*Great* Yarmouth.
Green (Engl.), **Groen** (Germ.), *green*;—*Green*wich, *Groen*ingen.
Gross (Germ.), *great*;—*Gross*bor.
Guada (Arab.), *a stream, the valley of a river*;—*Guada*lquivir.

Haff (Germ.), *a port, an inlet of the sea*;—Curische*haff*.
Hai (Chin.), *the sea*;—Kan*hai*.
Hall (Engl.), *a house*;—Basing*hall*.
Ham, Hamm, Hamn, (Swed.), *a port*;—Friedrichs*ham*, Carls*hamn*.
Ham, Heim, Hem (Teut.), *a home, a village, a town*;—Birming*ham*, Colding*ham*, Dront*heim*.
Haus, Hausen, Huus, House (Teut.), *a dwelling*;—Al*haus*, Mull*hausen*, Agger*huus*, Auchter*house*.
Haven, Havn (Teut.), *a port, or harbour*; — New*haven*, Karls*haven*, Thors*havn*.
Head (Engl.), *a promontory, a cape*;—Holy*head*, St Abb's *Head*.
Hill (Engl.), *a height, a mountain*;—Box*hill*, Thorn*hill*.
Hima (Sanscr.), *frost, winter*;—*Hima*laya.
Hissar (Turk.), *a stronghold*;—Kara*hissar*.
Hithe (Ang.-Sax.), *a port, a harbour*;—Queen*hithe*.
Ho (Chin.), *a river, a canal*;—Hoang*ho*, Yu*ho*.
Hoch, Hohe, Hoy (Teut.), *high*;—*Hoch*stadt, *Hohen*stadt, *Hoy* Island.
Holl (Germ.), *hollow, low*; — *Hol*land.
Holm (Teut.), *an islet, flat land on the bank of a river or firth*;—Stock*holm*, Ax*holm*, Green*holm*.
Holy, Haly, Hallow, Heiligen (Teut.), *sacred, venerable*; — *Holy*head, *Holy* Isle, *Holy* Loch, *Hali*fax, Ein*hallow*, *Helig*oland.
Hope (Teut.), *a creek, a bay*;—St Margaret's *Hope*, Long *Hope*.
Hope (Teut.), *a little vale*;—Dry*hope*, Stan*hope*.
Horn (Germ.), *a mountain peak*;—*Horn*berg, Wetter*horn*.
Hrad (Sclav.), *a town*;—*Hrad*ek.
Hurst (Ang.-Sax.), *a wood, a forest*;—Lynd*hurst*.

Iar (Russ.), *a bank*;—*Iar*oslaf, Kras*noiarsk*.
Ieni (Turk.), *new*;—*Ieni*caleh.
Ili (Turk.), *a country*;—Roum*ili*.
Inch, Innis, Ennis, Ynys (Celt.), *an island*;—*Inch*keith, *Innis*bofin, *En*niskillen, *Ynys*ymoch.

ING, INGE, INGEN (Teut.), *a field, a plain, a meadow*; — Godalming, Thuringe, Tubingen.

INVER, INNER (Celt.), *the mouth of a stream*;—Inveraray, Innerkip.

ISLE (Engl. and Fr.), ILHA (Port.), *an island*;—*Isle* of Wight, Fair *Isle*, Belleisle, *Ilha* Grande.

KAISER (Germ.), *Cæsar, the Emperor*; —*Kaiser*stadt.

KAMEN, KAMIEN (Sclav.), *a stone, a rock*;—*Kamientz, Kamienko*.

KARA (Tart.), *black*;—*Kara*mania.

KELAT, KALAH (Arab.), *a fort*;—*Kelat*.

KEND, KAND (Sanscr.), *a kingdom, a fortress*;—Tasch*kend*, Samar*kand*.

KENI (Turk.), *a town*;—Kadi*keni*.

KIANG (Chin.), *a river*;—*Kiang*-yuen, Yang-tse-*Kiang*.

KIL (Celt.), *a church*;—*Kil*marnock, *Kil*kenny.

KIN (Celt.), *a point, a headland*;—*Kin*tyre.

KIN (Chin.), *gold*;—*Kin*chan.

KING (Engl.), KOENIG (Germ.), *a monarch*;—*King*ston, *Koenig*stadt.

KIOBING, KIOPING, KOPING, COPEN, CHIPPEN (Teut.), *a market*;—Ny-*kiobing*, Lid*kioping*, Lin*koping*, *Co-penhagen*, *Chippen*ham.

KIRK, KIRCHEN, KERQUE, CHURCH (Teut.), *a church*;—*Kirk*cudbright, *Kirk*by-Lonsdale, Fal*kirk*, Dun-*kirk*, Hohen*kirchen*, *Kirchen*lauter, Christ*church*.

KIS (Sclav.), *little*;—*Kis*chenef.

KLEIN (Germ.), *little*;—*Klein*aspach.

KNOCK, CNOCK (Celt.), *a hill*;—*Knock*-meledown, *Knock* of Strathisla.

KOPF (Germ.), *a head, a summit*;—Ochsen*kopf*.

KOUL, KAL, KOL (Tart.), *a lake*;—Tchebar*koul*, Bai*kal*.

KRASNO (Sclav.), *ruddy, fair*;—*Kras-noiarsk*.

LAKE, LOCH, LOUGH, LAACH, LAGO (Teut.), *a sheet of water*;—*Lake* Superior, Gair*loch*, *Loch*nagar, *Lough*-Neagh, Glenda*lough*, *Laach*ersee, *Lago*-Maggiore.

LAND (Teut.), *a country, a region*;— Eng*land*, Nether*lands*, Mi*lan*.

LANG, LANGE, LANGEN (Teut.), *long*; —*Lange*land, *Lang*holm, *Langen*-berg.

LAUTER (Germ.), *clear*; — *Lauter*-bourg.

LAW (Ang.-Sax.), *a hill*;—North Berwick *Law*, Ward*law*.

LES, LIS (from ECCLES), *a church*; —*Les*mahago, *Lis*more.

LEY, LEIGH (Ang.-Sax.), *pasture, fallow-ground*;—Dud*ley*, Chud*leigh*.

LICHT, LICHTEN (Germ.), *clear, bright*; —*Lichten*wald.

LIN (Celt.), *a pool, a lake, a waterfall*; —Ros*lin*, *Lin*lithgow, *Lin*ton.

LIN (Esth.), *a town*;—Tab*lin* or Da-ni*lin* (Revel).

LITTLE (Engl.), *small*;—*Little*ton.

LLAN (Celt.), *a church*;—*Llan*daff.

MA (Arab.), *water*;—Bahr-bela-*ma*.

MAHA (Sanscr.), *great*;—*Maha*noddy.

MAHL (Hindost.), *a place, a fortress*; —Bara*mahl*.

MANDEL, MANDALA (Sanscr.), *a country, a kingdom*;—Coro*mandel*.

MARK, MARCH (Teut.), *a boundary, a frontier, a division, a district*;— Den*mark*, *Mark*dorf, *March*mont.

MARKET, MARKT (Teut.), *a market*; —*Market* Weighton, New*market*, *Markt*bach.

MEDINA (Arab.), *a town*;—*Medina*-celi.

MEN (Chin.), *a passage*;—Hou*men*.

MIDDLE (Eng.), *in the midst, between*; —*Middle*sex, *Middle*ton, *Middle*by.

MILL (Eng.), MUHL (Germ.), *a mill*; —*Mill*ford, New*mill*, *Muhl*hausen.

MINSTER, MONASTER, MUNSTER (Teut.), MOUTIER (Fr.), *a monastery, a monastic church*;—West*minster*, *Monaster*boice, *Munster*, Far*moutiers*.

MONT (Fr.), MONTE (Ital.), MOUNT, MONTH (Eng.), MONADH, MYNYDD (Celt.), *a hill, a mountain*:—*Mont* Blanc, Beau*mont*, *Monte*negro, March*mont*, *Month*keen, *Monadh*-liadh, *Mynydd*-Mawr.

MOOR, MORE, MUIR (Eng.), *a waste, a wild, heathy ground*;—Dart*moor*, Ex*more*, Lammer*muir*, Glads*muir*.

MOR (Celt. and Sclav.), *the sea*;—Ar-*morica*, *Morea*.

MOR, MOHR, MORE, MAWR (Celt.), *great, large*;—Strath*more*, *Mor*ven, Arran*more*, Penmaen*mawr*.

MOUTH (Eng.), MONDE, MUNDE (Germ.), *the efflux of a stream*;— Ports*mouth*, Ply*mouth*, Spey*mouth*, Dender*monde*, Tanger*munde*.

MULL (Teut.), *a headland*;—*Mull* of Galloway.

NAGAR, NAGUR, NUGGUR (Sanscr.), *a town*; — Bis*nagar*, Sri*nagur*, Ahmed*nuggur*.

NAGY (Sclav.), *great*;—*Nagy*-Kikinda.

NAN (Celt.), *a brook*;—*Nantes*.

NAN (Chin.), *southern*;—*Nan*king.

NEW, NEU, NIEUW, NY (Teut.), NOUVEAU, NOVELLE, NEUF (Fr.), NUOVO,

Nuova (Ital.), **Nuevo** (Span.), **Novoi, Novaia, Novy** (Sclav.), **Neo, Nea** (Gr.), *new, modern*;—*New*castle, *Neu*burg, *Nieuw*kerk, *Ny*land, *Nouvelle* France, Chateau*neuf*, Casal*nuovo*, Citta*nuova*, Castella la *Nueva*, *Nov*gorod, *Novaia* (Nova) Zembla, *Novy*grad, *Neo*castro.

Ness, Naes, Noss (Teut.), *a headland*;—Caith*ness*, Dunge*ness*, Lindes*naes*, *Noss*head, Swiatoi-*noss*.

Nether, Nieder (Teut.), *lower*;—*Nether*lands, *Nieder*lahnstein.

Nijni (Sclav.), *nether, lower*;—*Nijni*-Novgorod.

Nor (Tart.), *a lake*;—Koko*nor*.

North, Nord, Nor (Teut.), *northern*;—*North*ampton, *Nord*hausen, *Nor*folk, *Nor*way, *Nor*mandy.

Oe (Teut.), *an island*;—Far*oe*.

Old, Olden, Ald, Oude (Teut.), *old, ancient*; — *Old*ham, *Ald*borough, *Olden*borg, *Oude*narde.

Ost, Oster, Oost (Teut.), *eastern*;—*Ost*end, *Oster*hofen, *Oster*rich (Austria), *Oost*ham.

Oula (Chin.), *a river*;—Saghalien *Oula*.

Over, Ober, Oder (Teut.), *upper*;—*Over*stone, *Ober*hofen, *Oder*berg.

Patam, Patan, Patnam (Sanscr.), *a town or city*;—Seringa*patam*, Chinraya*patan*, Kistna*patnam*.

Pe (Chin.), *north*;—*Pe*kin.

Pei (Chin.), *white*;—*Pei*ho.

Pen (Celt.), *a hill, a headland, a top, a termination*;—*Pen*maenmawr, *Pen*rhyn, *Pen*fahel, A*pen*nines.

Penj, Punj (Sanscr.), *five*;—*Penj*chehr, *Punj*ab.

Plessis (Fr.), *a hedge, a park*;—*Plessis*-lès-Tours.

Pol, Poli, Polis, Ple, Ples, Ble (Gr.), **Pore, Poor, Pour, Poora, Poorah, Pura** (Sanscr.), *a city or town*;—Sebasto*pol*, Nico*poli*, Perse*polis*, Adriano*ple*, Na*ples*, Greno*ble*, Singa*pore*, Shahjehan*poor*, Rad-jah*pour*, Now*poorah*, Caunja*pura*.

Pool, Pole, Poll, Pow, (Eng.), *still water*;—Liver*pool*, Ulla*pool*, Wal*pole*, Kirka*pol*, *Pol*mäise, *Pow*foulis.

Pont, Ponte (Fr. and Ital.), **Puente** (Sp.), *a bridge*; — *Pont*-a-Mousson, *Ponte*corveau, *Puente*deume.

Port (Eng.), **Porto** (Ital. and Port.), **Puerto** (Span.), *a port or harbour*;—*Port*smouth, Devon*port*, *Porto*bello, *Puerto*-real.

Poulo (Gr.), *little*;—*Poulo*-Samo.

Poulo (Mal.), *an island*;—*Poulo* Pen-

Prayaga (Sanscr.), *a confluence, or meeting of waters*;—Deva*prayaga*.

Queen (Engl.);—*Queens*ferry, *Queens*land, *Queen*hithe.

Rajah, Raj (Sanscr.), *a king*;—*Rajah*mundry, *Raj*pootana.

Ras (Arab.), *a head*;—*Ras*-al-Had.

Rath, Rait, Roth, Ruth (Celt.), *a fortified place*;—*Rath*cormack, *Rath*ven, Logie*rait*, *Roth*bury, *Ruth*ven.

Real (Span.), *royal*;—Mont*real*.

Reich, Rik (Teut.), *of a king, a kingdom*;—*Reich*stadt, Oster*reich* (Austria).

Reka (Sclav.), *a stream*;—Tchernaia-*reka*.

Rio (Span.), *a river*;—*Rio*-de-la-Plata.

Roche (Fr.), **Rock** (Engl.), *a rock, a stronghold*; — *Roch*elle, *Rock*ingham, *Roc*roy, *Roq*uamadour.

Ros, Rose, Ross (Celt.), *a peninsula, a headland*;—*Ros*lin, Mel*rose*, *Rose*neath, Cul*ross*, Muck*ross*.

Salt (Eng.), **Salz** (Germ.), *salt*;—*Salt*coats, *Salz*bourg.

Scha, Sha, Cha (Chin.), *sand*;—*Sha*mo, Kin-*sha*-Kiang.

Schnee (Germ.), *snow*;—*Schnee*berg.

Schoen (Germ.), *fair, beautiful*;—*Schoen*brunn.

Schwarz (Germ.), *black*;—*Schwarzen*berg.

Sea, See, Zee, Soe (Teut.), *a sheet of water, a lake, a sea*;—*Sea*field, *See*land, Zuyder*zee*, Foemund*soe*.

Selo (Russ.), *a village*;—Tzarkoe-*selo*.

Semlia (Sclav.), *land*;—Novaia-*Semlia* (Nova-Zembla).

Seng (Dan.), *a meadow*;—Thor*seng*.

Serai, Sarai (Tart.), *a palace*;—Baktchi*serai*.

Sex (Ang.-Sax.), *Saxons*;—Es*sex*.

Shiel, Shiels (Ang.-Sax.), *a temporary hut, a summer dwelling*; — Gairn*shiel*, Gala*shiels*.

Si (Chin.), *western*;—*Si*hai, Chosi.

Sidy (Arab.), *a lord*;—*Sidy*-Isah.

Sierra (Span.), *a saw, a rugged ridge of mountains*;—*Sierra*-Nevada.

Sk (Russ.), *a contraction from* **Skoe** *and* **Skaia**, *the termination by which the name of a man or river is changed into an adjective, so as to denote a town*;—Alexandrov*sk*, Tobol*sk*.

Skerry (Teut.), *a reef, a rock, a rocky islet*;—*Skerry*vore.

Slieve, Sliabh, Sla (Celt.), *a hill*;—*Slieve*donard, *Sla*mannan.

Slot, Schlot (Dutch), *a fortress*;—*Slot*en.

SNOW (Eng.), SNEE (Dan. and Swed.), *snow*;—*Snow*don, *Snee*hattan.
SOO, SU (Tart.), *a river*;—Kara*su*.
SOUTH, SUD, SOEDER, SUTHER, SU, ZUYDER (Teut.), *southern*;—*South*wark, *Sud*bury, *Sodor* (Soedereys), *Suther*land, *Suf*folk, *Zuyder*zee.
SPRING (Engl.), *a well*;—*Spring*field.
STAD, STADT (Germ.), *a town*;—Frederic*stad*, Carl*stadt*.
STAN, SAN, JAN, TAN, TANA, TANIA (Sanscr.), *a land, a country*;—Afghani*stan*, Khora*ssan*, Azerbi*jan*, Boo*tan*, Rajpoo*tana*, Mauri*tania*.
STARO, STARY (Sclav.), *old*;—*Staro*-[illegible]elsk, *Stary*grad.
STAVRO (Gr.), *a cross*;—*Stavro*pol.
STEIN, STEEN, STEN, STONE, STAN, (Teut.), *a stone, a rock*;—Ehrenbreit*stein*, *Stein*bach, *Steen*kerque, *Sten*nis, *Stone*haven, *Stone*henge, Haly*stone*, *Stan*ton.
STER (Teut.), *a seat, a dwelling*;—Scrab*ster*, Ulb*ster*.
STOW (Ang.-Sax.), *a place, a dwelling*;—Chep*stow*, *Stow*.
STRATH (Celt.), *a valley*;—*Strath*more, *Strath*earn.
STROM (Teut.), *a stream, a current*;—Mal*strom*, *Strom*a, *Strom*ness.

TA (Chin.), *great*;—*Ta*chan.
TAG (Tart.), *a mountain*;—Mous*tag*.
TASCH (Turk.), *a stone*;—*Tasch*kiuprun.
TCHAI (Turk. and Pers.), *a river*;—Mourad-*Tchai*, Talkh-*Tchai*.
TCHANG, TCHOUNG (Chin.), *middle, central*;—*Tchang*-koue, *Tchoung*-chan.
TCHERNY (Sclav.), *black*;—*Tcherni*kov.
TCHING (Chin.), *a town, a wall*;—Sin*tching*.
TEL (Arab.), *a hill*;—*Tel*-el-ioudyeh.
TERRE (Fr.), TIERRA (Span.), *land*;—Fini*sterre*, *Tierra*-del-Fuego.
THAL (Germ.), *a valley*;—Schoen*thal*.
THORPE (Teut.), *a dwelling, a hamlet, a village*;—Al*thorpe*, Sib*thorpe*.
THWAITE (Teut.), *an isolated piece of land*;—Cross*thwaite*.
TOBER (Celt.), *a well*;—*Tober*mory, Ballin*tober*.
TONG (Chin.), *eastern*;—*Tong*-kong.
TOR, TORRE (Ital. and Span.), TOUR (Fr.), TOWER (Eng.), *a tower, a castle*;—*Tor*quemada, *Torre*-del-Greco, *Torres* Vedras, *Tour*-du-Pin, *Tower*-Hamlets.
TOWN, TON (Teut.), *a dwelling, a town*;—Wig*town*, Washing*ton*.
TRECHT, TRICHT, DRECHT (Dut.), *a ferry, a ford, a passage*;—U*trecht*, Maes*tricht*, Dor*drecht*.
TULLA, TULLY, TILLY, TOWIE, TOR, TOM (Celt.), *a hill, a height*;—*Tul*lamore, *Tully*bardine, *Tilly*body, *Towie*-Barclay, *Tor*-Alvie, *Tom*intoul.
UI, UJ (Hung.), *new, modern*;—*Ui*hely, *Uj*varos.
UNTER, UNDER (Teut.), *lower*;—*Unter*walden, *Under*cliff.
UPPER (Teut.), *higher*;—*Upper* Banchory, *Upper*navik.
VAL, VAU (Ital., Span., and Fr.), *a valley*;—*Val* d'Arno, *Val*ladolid, *Val*paraiso, *Val*romey, *Vau*cluse.
VAR (Hung.), *a fortified place*;—Teme*svar*.
VELIKI (Russ.), *great*;—*Veliki*-Novgorod.
VERKNEI (Russ.), *higher, upper*;—*Verknei*-Kamtchatsk.
VIC, WIC, WY (Teut. and Lat.), *a village*;—Vies*vic*, *Vic* de Bigorre, Aln*wick*, Long*wy*.
VILLE (Fr.), VILLA (Ital. and Span.), *a town*;—Haute*ville*, *Villa*franca.
WALD, WEALD (Teut.), *a forest*;—Schwarz*wald*, the *Weald* of Sussex.
WALL (Engl.), *a rampart, a dyke*;—*Wall*ingford, *Wall*town.
WEEM, WEM, UAMH (Celt.), *a cave*;—Pitten*weem*, *Wem*yss, *Uamh*var.
WEILER (Germ.), *a village*;—Baden*weiler*.
WEISSE (Germ.), *white*;—*Weissen*burg.
WELL (Engl.), *a spring*;—Holy*well*.
WEST, WESTER (Teut.), *western*;—*West*minster, *Wester*hofen.
WHITE, WHIT (Engl.), *white*;—*White*haven, *Whit*horn, *Whit*by.
WICK, WICH, VIC, WY (Teut.), *a village, a town*;—Runs*wick*, War*wick*, Nor*wich*, Vies*vic*, Neu*wy*.
WIESE (Germ.), *a meadow, a pasture*;—Elb*wiese*.
WORTH, WERTH, WAERT, WOERD (Teut.), *a dwelling, a hamlet, a village, a town*;—Tam*worth*, Rudolfs*werth*, Stevens*waert*.
YUEN (Chin.), *a country, a territory*;—Kiang-[illegible]
ZUYDER [illegible] *southern*;—*Zuyder*-

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